9161E57

Cornell University Library

BOUGHT WITH THE INCOME
FROM THE
SAGE ENDOWMENT FUND
THE GIFT OF
Henry W. Sage
1891

A.132479 29/12/1899

6421

RETURN TO
ALBERT R. MANN LIBRARY
ITHACA, N. Y.

JUL 8 19

DATE DUE

GAYLORD

PRINTED IN U.S.A.

CORNELL UNIVERSITY LIBRARY

3 1924 050 778 681

oK

Cornell University Library

The original of this book is in
the Cornell University Library.

There are no known copyright restrictions in
the United States on the use of the text.

http://www.archive.org/details/cu31924050778681

FLORA

OF

BRITISH INDIA.

FLORA OF BRITISH INDIA.

BY

SIR J. D. HOOKER, C.B., G.C.S.I.

M.D., F.R.S., D.C.L. OXON., LL.D. CANTAB.

CORRESPONDING MEMBER OF THE INSTITUTE OF FRANCE, AND HON. MEMBER OF THE
ASIATIC SOCIETY OF BENGAL.

ASSISTED BY VARIOUS BOTANISTS.

VOL. VII.

CYPERACEÆ, GRAMINEÆ AND GENERAL INDEX.

PUBLISHED UNDER THE AUTHORITY OF THE SECRETARY OF STATE FOR
INDIA IN COUNCIL.

LONDON:
L. REEVE & CO.
PUBLISHERS TO THE HOME, COLONIAL, AND INDIAN GOVERNMENTS,
6, HENRIETTA STREET, COVENT GARDEN.
1897.

QK
358
H67
v.7
c.2
A132479

LONDON:
PRINTED BY GILBERT AND RIVINGTON, LD
ST. JOHN'S HOUSE, CLERKENWELL, E.C.

PREFACE TO VOL. VII.

THE length of time, upwards of a quarter of a century, occupied in the publication of the Flora of British India, has resulted in the later volumes containing a far more complete account of the families of plants to which they are devoted than do the earlier volumes of theirs.

For this there are two reasons, the extension of the area of British India in the interval, and the many collections that have been transmitted to Kew from wholly or imperfectly explored regions of India during the same interval.

The extension of area has been: on the East, Munnepore, and by far the greater part of Burma, adding many Indo-Chinese genera and species to the flora; on the West, British Beluchistan and other trans-Indus hills and valleys, adding Oriental genera and species. Neither of these extensions have, however, added so much to the Indian flora as might have been expected; for, as regards Burma, extensive materials were already available from Pegu, Martaban, Tenasserim, and the upper and lower Irawaddy valleys; and as regards the West, the low country Oriental flora is represented in the plains of Sind and the Panjab, and the upland and alpine in the trans-Indus valleys, Western Tibet, and the Kashmir Himalaya.

On the other hand, the collections received from previously unexplored and partially explored regions of India proper have been numerous and full of novelty and interest. Of these the first in importance are Mr. C. B. Clarke's, whether for their extent, the knowledge and judgment with which the specimens were selected, ticketed, and preserved, or for the valuable observations which accompany them. They were obtained over a greater extent of India than had been traversed by any other Indian botanist, and at all elevations, up to 18,500 ft., from the bend of the Indus at Gilgit, Kashmir, and Western

Tibet, in the extreme West; from Sikkim, Bengal, Assam, and Munnepore in the East; from Behar, Central India, and Chota Nagpur in the centre; and from the Nilghiri Hills in the South. Next in importance are the Malay Peninsula collections made by Father Scortechini, the Messrs. Curtis, Wray, Hervey, Hullett, Merton, and Ridley, and by collectors sent by Dr. King from the Botanic Gardens of Calcutta. These latter have added several hundred species to the genera described in the first volume alone of this Flora, and have been published by Dr. King in the Journal of the Asiatic Society of Bengal. Thirdly rank Mr. Duthie's copious and excellently preserved collections made in Kashmir, Western Tibet, Garwhal, Kumaon, Rohilkund, Rajmahal, and Central India, and Dr. Aitchison's from the Kurrum and other valleys west of the Indus.

Of the works upon Indian Botany that have appeared during the publication of Flora of the British India, the more important are Mr. C. B. Clarke's "Compositæ Indicæ" (1876); Mr. Kurz's "Forest Flora of Burma" (1876); Dr. Brandis' "Forest Flora of N.-W. and Central India" (1874); Col. Beddome's "Flora Sylvatica of Southern India," vols. i. and ii. (1869-73), and his "Icones Plantarum Indiæ Orientalis," vol. i. (1874); Dr. Trimen's "Handbook of the Ceylon Flora," Parts i.—iii. (1893-5); and Dr. King's "Annals of the Botanic Gardens, Calcutta," vols. i.—vii. (1888-1897), which include illustrated monographs by himself and other Indian botanists of the Indian species of *Ficus*, *Quercus*, *Pedicularis*, *Magnoliaceæ*, *Anonaceæ*, *Bambusæ*, &c.

In the Preface to the first volume of this work I have stated that it was proposed to include in it the Ferns and their allies. This intention has been abandoned, owing to the appearance of excellent available works describing the Indian species, especially Hooker and Baker's "Synopsis Filicum" (1874); Col. Beddome's "Review of the Ferns of N.-W. India" (1880), and his "Handbook of the Ferns of British India" (1883), with Supplement (1892).

Having regard to this "Flora of British India," I must remind those who may use it that it has no pretensions to give full characters of the genera and species contained in it. It aims at no more than being an attempt to sweep together and systematize within a reasonable time and compass, a century of hitherto undigested materials scattered through a library of botanical books and monographs, and preserved in vast collections, many of which latter had lain unexamined for half a century in the cellars of the India House and in public and private herbaria. It is a pioneer work, which, besides enabling botanists to name with some accuracy a host of Indian plants, may, I hope, serve two higher purposes, to facilitate the compilation of local Indian floras and monographs of the large Indian genera; and to enable the phytographer to discuss the problems of the distribution of plants from the point of view of what is perhaps the richest, and is certainly the most varied botanical area on the surface of the globe, and one which, in a greater degree than any other, contains representatives of the floras of both the Eastern and Western Hemispheres.

J. D. HOOKER.

November, 1897.

ADDENDUM.

Vol. vii. p. 416, under 2. *S. chilianthum*, insert habitats:

Singapore, *Wallich*; **Malacca**, *Stevens*. DISTRIB.: **Java, Sumatra.**

FLORA OF BRITISH INDIA.

ORDER CLXXIII. **GRAMINEÆ.**

ERECT decumbent or creeping herbs, or in Tribe *Bambuseæ* shrubs or trees. *Stem* terete or compressed, jointed; internodes solid or hollow. *Leaves* simple, usually long and narrow, entire, parallel-nerved, with a sheathing base distinct from the blade; sheath split to the base (very rarely entire) with often a transverse hyaline erect appendage (*ligula*) at the union with the blade, facing the latter. *Inflorescence* terminal, rarely also from the upper sheaths, consisting of spicate racemed capitate or panicled spikelets. *Spikelets* of three or more alternate distichous bracts (*glumes*), of which the two lowest are normally empty, and the succeeding, if more than one, are arranged on an axis (*rachilla*), and are all or some of them flowering; within each flowering glume and opposite to it is an erect narrow 2-nerved scale (*palea*), the margins of which are infolded towards the glume and enclose at the base the true flower. *Flowers* uni- or bisexual, consisting of 2, rarely 3 or 6 microscopic scales (*lodicules*) representing a perianth, and stamens or a pistil, or both. *Stamens* 3, rarely 1, 2, 6, or very rarely many, hypogynous; filaments capillary; anthers versatile, fugacious, of two parallel cells, with no apparent connective; pollen globose. *Ovary* entire, 1-celled; styles 2, rarely 3, free or united at the base, usually elongate, and exserted from the sides or top of the spikelets, clothed with simple or branched stigmatic hairs; ovule erect, anatropous. *Fruit* a seed-like utricle (*grain*) free within the flg. glume and palea, or adherent to either or both; pericarp very thin, rarely thick or separable from the seed. *Seed* erect; albumen copious, mealy; embryo minute, at the base of and outside the albumen; cotyledon scutelliform, bearing on its face an erect conical plumule, and descending conical radicle.

Genera about 300; species estimated at about 3000, but many are doubtful, and more mere varieties; natives of all climates and regions.

In working up the grasses for this Flora, I find the multiplication of species to have passed all bounds, and their nomenclature to be involved in a corresponding degree. This has arisen from two principal causes, from authors not taking into account the wide area over which the individual species of grasses range,* and from the imperfection of the descriptions of the earlier and many later authors. It is sixty-two years since Kunth published his "Agrostographia Synoptica (Tubingen, 1833), which is an uncritical sweeping up of all previously known supposed genera and species, with imperfect descriptions and synonyms. It was succeeded (in 1835) by a second volume, in which a few hundred species of the first volume are very fully and accurately described, and valuable notes upon others are added. In 1855 Steudel's "Synopsis Graminum" appeared. It in no respect advances, and in many ways retards the student of the Order. Of more recent works on *Gramineæ*, three only are of great mark, namely, Munro's very able Monograph of the *Bambuseæ* (Trans. Linn. Soc. vol. xxvi. (1868); Bentham's revision of the genera, Gen. Plant. vol. iii.

---

* It is a fact familiar to every one who examines collections of plants from hitherto unexplored countries, that novelties amongst the grasses are very few indeed, compared with what occurs in other natural families.

(1883), a work of remarkable completeness and accuracy, considering the chaotic condition in which the author found the Order; and Hackel's admirable monograph of the *Andropogoneæ* in A. de Candolle "Monogr. Phanerog." vol. vi. (1889), the largest and most difficult Tribe of grasses.

I have cited synonyms to a much greater extent in this than in any other Order described in the "Flora of British India" (except the "Cyperaceæ" by Clarke) with the view of aiding the researches of future authors. Many of these synonyms had never been fixed with any approach to exactness, and many were for the first time identified during Mr. Jackson's and my labours on the "Index Kewensis." I cannot expect that all will prove to have been satisfactorily reduced, and still less that all have been brought to light.

Referring to the classification of the Indian genera, I have been compelled to diverge somewhat from Bentham's arrangement, and to abandon some of his Tribes and Subtribes, in many cases following Hackel's more recent and well-considered views. These divisions throughout the Order are of very unequal value, and are as difficult of delimitation as of definition upon any fixed principles. They are, indeed, in some cases arbitrary, and in others more or less artificial. In this matter, and in the description or revision of some of the very difficult genera, I have derived great aid from Dr. Stapf, Assistant in the Herbarium of the Royal Gardens, who has lately been instructed by the Director of Kew to study and name the materials in that Herbarium critically. As Dr. Stapf shares my views as to the wide ranges of the species, and the undue multiplication of their synonyms, his labours may be expected to yield far-reaching results, taxonomic, morphological and geographical, and to modify some of the conclusions arrived at in the following attempt to methodize the Indian *Gramineæ*. As affecting the numbers and synonyms taken from "Wallich's List," I have to observe that for some of them I have had to depend on the ticketed duplicates in Herb. Hook. and Benth., the types being wanting in the Wallichian collection in the rooms of the Linnæan Society.

Series A. **Panicaceæ.** Spikelets articulate on their pedicels, or deciduous with them, 1–2-fld., upper fl. alone (if 2) fruiting.

Exceptions. Spikelets inarticulate on their pedicels in *Arundinella* and *Isachne*. Spikelets articulate on their pedicels, or with articulate pedicels occur in *Poaceæ*, in *Alopecurus*, *Cyathopus*, *Polypogon*, *Fingerhuthia*, and *Lophatherum*. Upper flower alone fertile in Tribe *Phalarideæ* of *Poaceæ*, and in *Tristachya*.

I. Rachis of infl. inarticulate, or subarticulate in *Stenotaphrum*. Fl. gl. usually coriaceous or herbaceous.

Tribe I. PANICEÆ. *Spikelets* 2-fld., upper fl. bisexual, lower male or neuter, rarely both fertile. (*Spinifex* is diœcious.)

* Spikelets articulate on their pedicels, except *Isachne* and *Arundinella*.

† Spikelets not involucellate by bristles.

§ *Spikelets not awned* (*gl. II and III beaked or awned in Pan. Crus-galli*). (*See also Tricholæna* and *Arundinella.*)

Spikelets dorsally flattened, base not thickened; gls. 3, with very rarely a minute fourth (lowest) . . .	1. PASPALUM.
Spikelets of *Paspalum*, but with a thickened basal callus .	2. ERIOCHLOA.
Spikelets subglobose, panicled; gls. 4, I and II separately deciduous, subequal	3. ISACHNE.
Spikelets panicled or spicate, gls. 4 (2 in *P. subeglume*) I and II very rarely subequal, II and III awned in *P. Crus-galli*, IV rarely very shortly awned . .	4. PANICUM.
Spikelets of *Panicum*, but gl. IV. narrowed into a short, flattened stipes, or with 2 appendages near the base .	5. ICHNANTHUS.
Spikelets innumerable, very minute, hairy, densely crowded in the capillary branches of a very large panicle	6. THYSANOLÆNA.

Spikelets panicled, branches of panicle produced beyond the uppermost spikelets; gl. I minute, hyaline . . 7. CHAMÆRAPHIS.
Diœcious, male spikelets in clustered spikes, fem. solitary . . . . 8. SPINIFEX.

§§ *Spikelets awned, except in some sp. of Tricholæna and Arundinella.*

Spikelets of *Panicum*, but nerves of gl. II broadly fimbriate, and palea of III deeply cleft, IV awned • 9. AXONOPUS.
Spikelets silky; gl. I 0, or minute and distant from II and III with usually capillary awns . . . . . 10. TRICHOLÆNA.
Spikelets solitary or fascicled on a simple rachis or the branches of a panicle; gl. I long awned . . . 11. OPLISMENUS.
Spikelets persistent on the pedicels, or gls. I and II separately deciduous, IV deciduous; usually awned, awn bent . . . . 12. ARUNDINELLA.

†† Spikelets each surrounded by an involucel of bristles . 13. SETARIA.

** Spikelets persistent on their pedicels, at least the fertile, or deciduous with their pedicels.

† *Spikelets in involucelled deciduous fascicles.*

Involucel of bristles . . . . 14. PENNISETUM.
Involucel of spines connate at the base . . . . . 15. CENCHRUS.

†† *Spikelets not involucelled.*

Spikelets 2-seriate on a flat subarticulate rachis . . 16. STENOTAPHRUM.
Spikelets (at least the fertile) 1-seriate on an inarticulate flat rachis, the base of which dilates and encloses a fruiting spikelet . . . . 17. THUAREA.

Tribe II. ORYZEÆ. *Spikelets* 1-fld., articulate on their pedicels and deciduous from them. *Palea* 1–3-nerved. *Stamens* 6 or fewer.

Spikelets 2-sexual, awned or not; gls. 4, I and II minute or setaceous . . . . 18. ORYZA.
Spikelets 2-sexual, awnless; gls. 2, broad, thin . 19. LEERSIA.
Spikelets 2-sexual, awned; gls. 2, narrow, thin . . 20. HYGRORHIZA.
Spikelets 1-sexual; fruiting gl. inflated; leaves broad . 21. LEPTASPIS.

Tribe III. ZOYSIEÆ. *Spikelets* 1-fld., deciduous with their pedicels, 2-sexual, or some imperfect.

* *Spikelets fascicled.*

Spikes geminate; fascicles unilateral . . . . . 22. TRACHYS.
Spikes solitary; fascicles quaquaversal; gl. III echinate . 23. TRAGUS.

** *Spikelets solitary, rarely 2-nate.*

Racemes slender; pedicels flattened; gl. I and II muricate . . . . 24. LATIPES.
Raceme slender; spikelets minute, base of gl. I saccate . 25. LOPHOLEPIS.
Spike very slender; spikelets narrow; gl. I and II awned . . . . 26. PEROTIS.
Spike rigid; spikelets appressed to the rachis, not awned . 27. ZOYSIA.

II. Rachis of inflorescence usually articulate.

Tribe IV. ANDROPOGONEÆ. *Spikelets* usually 2-nate, or the terminal in the infl. 3-nate, pairs homo- or heterogamous. *Fl. gl.* smaller than the empty, hyaline, often awned or reduced to an awn.

Subtribe I. MAYDEÆ. *Spikelets* spicate, all 1-sexual; male spikes in terminal panicles, or continuous with the fem spike.

Fruiting spikelets enclosed in a stony, nut-like polished bract . . . . 28. COIX.
Fruiting spikelets, having all the inner gl. concealed within the greatly enlarged hardened outer . 29. POLYTOCA.
Fruiting spikelets densely crowded on a cylindric spongy rachis, grain exposed . . . . 29*. ZEA.

Subtribe II. DIMERIEÆ. *Spikelets* homogamous, secund on a slender inarticulate rachis, 1-fld., diandrous . . . . 30. DIMERIA.

Subtribe III. SACCHAREÆ. *Spikelets* homogamous, in compound racemes or panicles (except *Pollinia*); gl. I not sunk in a hollow of the rachis.

* *Rachis not or rarely fragile.*

Spikelets in a cylindric silvery thyrsus, 1-fld., not awned . 31. IMPERATA.
Spikelets panicled, 2-nate, 1-fld., awned . . . . 32. MISCANTHUS.

** *Rachis fragile.*

Spikelets in panicled racemes, 2-fld., awned . . . 33. SPODIOPOGON.
Spikelets in geminate digitate or fascicled spikes . . 34. POLLINIA.
Spikelets in a thyrsus of spiciform racemes, 1-fld., awnless 35. SACCHARUM.
Spikelets in a thyrsus of spiciform racemes, 1-fld., awned . 36. ERIANTHUS.

Subtribe IV. ISCHÆMEÆ. *Spikelets* many, in solitary digitate or fascicled spikes, usually heteromorphous; gl. I not sunk in a hollow of the rachis. (See *Pollinia* in *Sacchareæ*; *Vossia* in *Rottboellieæ*.)

* *Margins of gl. I of sessile spikelet inflexed.*

Spikes rarely solitary; spikelets 2-nate, 2-fld., awned . 37. ISCHÆMUM.
Spikes solitary; spikelets 1-fld., gl. I pectinate . . 38. EREMOCHLOA.

** *Margins of gl. I of sessile spikelet not inflexed.*

Spikes solitary; spikelets 2-nate, 1–2-fld., 2-awned . . 39. POGONATHERUM.
Spikes solitary or 2-nate; spikelets 2-fld., diandrous; gl. I very broad, truncate . . . . 40. APOCOPIS.
Spikes 2-nate or digitate; spikelets 1-fld. . . . 41. ARTHRAXON.
Spikes digitate; spikelets 2-fld.; gl. I tubercled . . 42. THELEPOGON.
Spikes 2–∞-nate; spikelets 2-nate, upper alone awned . 43. LOPHOPOGON.

Subtribe V. APLUDEÆ. *Spikelets* 3 on an inarticulate rachis . . . . 44. APLUDA.

Subtribe VI. ROTTBOELLIEÆ. *Spikelets* homo- or hetero-gamous, 1–2-fld, solitary, or 2- rarely 3-nate on the internodes of an articulate spike or raceme, not awned (gl. I caudate in *Vossia*); gl. I not keeled, adnate to or sunk in a depression formed by the internode and pedicel of the upper spikelet; gls. of sessile spikelet 4.

Spikelets 2-nate, gl. I caudate . . . . 45. VOSSIA.
Spikelets 2-nate, gl. I flat . . . . 46. ROTTBOELLIA.
Spikelets 2-nate, gl. I globose . . . . . . 47. MANISURIS.
Spikelets solitary, gl. I convex . . . . . . 48. OPHIURUS.

Subtribe VII. RATZEBURGIEÆ. *Spikelets* homogamous, 3-nate on the slender internodes of a solitary flattened fragile spike, two perfect, 1-fld., third imperfect; gls. 4 . . . . 49. RATZEBURGIA.

Subtribe VIII. EUANDROPOGONEÆ. *Spikelets* heterogamous, 1-fld., 2- rarely 3-nate on the whorled articulate branches of simple or compound racemes or panicles (solitary in *Cleistachne*); gls. 4, I not keeled, IV usually awned.

Spikelets 2–3-nate, in a simple spike, gl. I with tubercled penicillate ribs . . . . 50. ELIONURUS.
Spikelets solitary, terminating the branches of a thyrsoid panicle . . . . 51. CLEISTACHNE.
Spikelets capitate, male sessile, 2-fld., forming an involucriform whorl round the pedicelled fem. . . . 52. GERMAINIA.
Spikelets 2-nate, or the uppermost 3-nate, spicate, or panicled . . . . 53. ANDROPOGON.
Spikelets in 2 superposed series; upper series of heterogamous pairs, and a terminal male, lower a whorl of 4 persistent males or neuters . . . . . . 54. ANTHISTIRIA.
Spikelets as in *Anthistiria*, but male and neuter spikelets deciduous with the fem.; callus 0 . . . . . 55. ISEILEMA.

Series B. **Poaceæ.** *Spikelets* continuous (not articulate with) their pedicels, 1– many-fld.; rachilla articulate at the base, and often between the flg. gls.; lowest fl. always fruiting, upper often male or neuter.

Exceptions. Upper fl. alone bisexual in *Phalarideæ*. *Spikelets* articulate on their pedicels, or gl. I and II separately deciduous occur in *Alopecurus*, *Melica*, *Fingerhuthia*, *Cyathopus*, and *Sphærocaryon*.—See under *Panicaceæ* some genera with spikelets inarticulate at the base.

Tribe V. PHALARIDEÆ. *Spikelets* with a terminal perfect fl., and one or more imperfect male or neuter below it; rachilla not produced beyond the perfect fl.

Panicle contracted or spiciform; spikelets awnless . . 56. PHALARIS.
Panicle spiciform; gls. 6, III and IV neuter, awned; stamens 2 . . . . 57. ANTHOXANTHUM.
Panicle lax.; gls. 6, III and IV male, awned or not . 58. HIEROCHLOA.

Subtribe VI. AGROSTIDEÆ. *Spikelets* 1-fld.; rachilla jointed at the base, produced or not beyond the flg. gl.; gls. 3, I and II empty, III flg. awned.

Exceptions. Spikelets sometimes 2-fld. in *Sporobolus* and *Muehlenbergia*.

Subtribe I. STIPEÆ. *Spikelets* panicled; rachilla not produced beyond gl. III; fl. gl. rigid or hard, awned (except *Milium*).

Gl. III narrow, awn 3-fld. . . . . 59. ARISTIDA.
Gl. III narrow, awn entire, grain terete . . . . . 60. STIPA.
Gl. III broader, awn entire, grain dorsally compressed . 61. ORYZOPSIS.
Gl. III obovoid, awn 0, grain oblong . . . . . 62. MILIUM.

Subtribe II. PHLEOIDEÆ. *Spikelets* in spiciform or subspiciform panicles, gl. III hyaline, loosely wrapping the grain; stigmas exserted from the top of the spikelet.

* *Rachilla produced beyond the flg. gl.*

Gl. I and II shorter than III . . . . 63. HELEOCHLOA.
Gl. I and II longer than III . . . . 64. PHLEUM.

** *Rachilla not produced.*

Gl. I and II longer than III; panicle cylindric . . 65. ALOPECURUS.
Gl. I and II minute; panicle laxly subspiciform . . 66. PHIPPSIA.

Subtribe III. EUAGROSTEÆ. *Spikelets* usually small, in open or contracted many-fld. panicles; gls. usually thin or membranous; stigmas laterally exserted from the spikelet. Spikelets rarely 2-fld. in *Sporobolus* and *Muehlenbergia*.

* Rachilla not produced beyond gl. II.

† *Spikelets articulate on their pedicels, or gl. I and II separately deciduous, or pedicel articulate in the middle.*

Spikelets oblong; gl. I and II 3-nerved, III 5-nerved, awnless	67. CYATHOPUS.
Spikelets very narrow; gl. I and II 3-nerved, III faintly 1–3-nerved, usually awned	68. GARNOTIA.
Spikelets compressed; gl. I and II subequal, awned, nerved	69. POLYPOGON.
Spikelets subglobose; gl. I nerveless, II and III 1-nerved, awnless	70. SPHÆROCARYUM.

†† *Spikelets and pedicels inarticulate, gl. I and II persistent.*

Gls. all awnless; I and II 1-nerved, pericarp of grain loose	71. SPOROBOLUS.
Gl. I and II subequal, 1-nerved, awnless, awn of III dorsal or 0	72. AGROSTIS.
Gl. I and II unequal, awnless, 1-nerved, awn of III terminal	73. MUEHLENBERGIA.
Gl. I and II 3-nerved, awnless, base of III penicillate with long hairs	74. CALAMAGROSTIS.
** Rachilla produced beyond gl. III usually penicillate with long, silky hairs; gl. I and II 3-nerved.	75. DEYEUXIA.

Tribe VII. AVENEÆ. *Spikelets* 2- or more fld., panicled, very rarely spicate, or panicle subspiciform; fl. gls. usually awned, awn geniculate and often twisted, rarely straight or 0; rachilla produced or not beyond the upper fl. gl.

Subtribe I. AIREÆ. *Spikelets* 2-fld.; gls. membranous; rachilla not produced.

Gl. I acute, many-nerved; fl. gl. long-ciliate	76. ERIACHNE.
Spikelets minute; rachilla and keel of fl. gl. ciliate	77. ZENKERIA.
Spikelets awnless; gl. III largest 2-sexual, IV male	78. COELACHNE.
Spikelets 3-nate; gl. I and II awnless, III male, cleft, awned in the cleft	79. TRISTACHYA.
Gl. I and II awnless, III and IV bisexual, hyaline, dorsally awned	80. AIRA.

Subtribe III. EUAVENEÆ. *Spikelets* 2- or more fld.; rachilla produced.

Spikelets 2-fld., both bisexual, awned	81. DESCHAMPSIA.
Spikelets 2-fld., lower fl. bisexual awnless, upper male or neuter awned	81*. HOLCUS.
Spikelets 2–6-fld.; fl. gl. awned, awn subterminal or dorsal	82. AVENA.
Spikelets 3- or more-fld.; fl. gl. deeply cleft, awned in the cleft	83. DANTHONIA.

Tribe VIII. CHLORIDEÆ. *Spikelets* 1- or more-fld., 2-seriate (sometimes very distantly) and secund on an inarticulate spike or on the spiciform branches of a slender panicle; fl. all or the lower only bisexual; rachilla produced or not beyond the upper fl. gl.

* *Spike solitary, terminal* (*see also* Chloris).

Spikelets minute, 1-fld., awnless	84. MICROCHLOA.
Spikelets 1–2-fld., in pedicelled deciduous articulate clusters, awned	85. GRACILEA.
Spikelets 1-2 fld., in sessile inarticulate clusters, awned	86. ENTEROPOGON.
Spikelets many-fld.; fl. gl. 3-awned	87. TRIPOGON.

** *Spikes or spiciform branches digitate, racemed or panicled* (*or solitary in* Chloris).

Spikes digitate, 1-fld., upper imperfect fl. 0	88. Cynodon.
Spikes solitary, spicate or racemed; spikelets 2- or more-fld., upper fl. imperfect	89. Chloris.
Spikes digitate or whorled; spikelets 3–6-fld., densely crowded, awnless	90. Eleusine.
Spikes racemed on a long rachis; spikelets 2–3-fld., awned	91. Dinebra.
Spikes panicled, filiform; spikelets very minute, alternate, 1- or more fld., awnless	92. Leptochloa.
Spikes very long, filiform, simple or divided; spikelets very few, distant, 1-fld., awned	93. Dichætaria.

Tribe IX. Festucaceæ. *Spikelets* 2- or more-fld., pedicelled, rarely sessile, in effuse or contracted rarely spiciform, panicles; rachilla articulate at the base and often at the base of the fl. gls., always produced beyond the uppermost fl. gl.

Subtribe I. Pappophoreæ. *Spikelets* few- or many-fld.; gls. many-nerved, fl. gls. many-awned or 4–5-lobed.

Spikelets spicate, 2–5-fld.; empty gls. 4, 2 upper and flg. 4-lobed; fl. gl. with a dorsal awn	94. Pommereulla.
Spikelets in simple or branched spikes; fl. gl. many-awned	95. Pappophorum.

Subtribe II. Arundineæ. *Spikelets* panicled, 2–many-fld.; gls. very narrow, flg. penicillate with long silky hairs on the callus or sides or both, lowest fl. gl. sometimes male or neuter.

Rachilla elongate, glabrous; fl. gl. silkily hairy	96. Arundo.
Rachilla very short; fl. gls. glabrous, callus with long silky hairs	97. Phragmitis.

Subtribe III. Seslerieæ. *Spikelets* in spiciform panicles, or in spicate clusters with (in the Indian species) many imperfect spikelets of imbricating gls. at the base of the spike or of the clusters, 1- or more-fld. (*Cynosurus* has dimorphous spikelets).

Spikelets in a cylindric spike, articulate on very short pedicels; gl. I and II awned	98. Fingerhuthia.
Spikelets very minute, in globose clusters on an elongate simple rachis	99. Elytrophorus.
Spikelets in a dense unilateral panicle, uppermost of each branchlet 1-fld., concealed by the longer lower empty gls.	100. Lamarckia.
Spikelets in spiciform clusters, uppermost of each cluster 2–5-fld., lower of distichous subulate empty pectinately arranged gls.	101. Cynosurus.

Subtribe IV. Eragrosteæ. *Infl.* various. *Spikelets* 2–many-fld.; fl. gls. 1–3-nerved, entire, 3-toothed, 3-lobed or 3-awned.

Panicle spiciform; spikelets 2–5-fld.; fl. gls. scarious, secund, mucronate or shortly awned	102. Koeleria.
Panicle effuse; spikelets 2–4-fld.; gl. I very short, 3-nerved, sub 3-toothed, fl. gl. broadly truncate, 3-nerved	103. Catabrosa.
Infl. various; spikelets many-fld.; empty gls. shorter than the lowest flg. gl., 1-nerved; flg. gls. 3-nerved; grain very minute, terete	104. Eragrostis.
Infl. pyramidal; spikelets many-fld.; empty gl. longer	

than the lowest, gl. II subulate, 1-nerved; flg. gls. 3-nerved; grain broad, concave . . . . . 105. Myriostachys.
Infl. subpanicled; spikelets many-fld.; empty gl. shorter than the lowest flg. gl. I 3-nerved, II 5-nerved; rachilla silky; flg. gls. 3-nerved, grain grooved . 106. Halopyrum.
Infl. capitate in the (Indian sp.); spikelets few or many-fld.; empty gls. shorter than the flg., I 1–3-nerved, II 5-nerved; fl. gls. 3-nerved, villous; grain broad, concave . . . . 107. Coelachyrum.
Spikelets sessile on the spiciform branches of a tall, broad panicle, many-fld.; fl. gls. 3–4-toothed . . 108. Diplachne.

Subtribe V. Meliceæ. *Spikelets* usually panicled, 1- or more-fld.; gls. many, upper smaller, empty, convolute in a clavate mass.

Gl. I and II separately deciduous . . . . . . 109. Melica.

Subtribe VI. Centotheceæ. *Spikelets* 1- many-fld., 1–2-seriate on the rachis of a simple spike or on the long slender branches of a simple panicle.—Leaves broad, tessellately nerved.

Spikelets 1-fld., secund and articulate at the base; upper gls. empty, convolute with setiform tips . . . 110. Lophatherum.
Spikelets 3- or more-fld., secund, persistent; fruiting gls. with reflexed submarginal bristles . . . . 111. Centotheca.
Spikelets 1–4-fld., secund, 2-seriate on the rachis of a simple spike . . . . 112. Streptogyne.

Subtribe VII. Eufestuceæ. *Spikelets* usually panicled, 2- or more-fld.; fl. gls. 5- many- (very rarely 3-) -nerved, upper empty or 0; styles short (except *Duthiæa*). (Spikelets of *Brachypodium* in long very lax spikes of *Æleuropus* in crowded spikes.)

Spikelets many-fld., subspicately crowded; fl. gl. broad, many-nerved. Prostrate, leaves rigid, pungent . 113. Æleuropus.
Spikelets few-fld., in close secund clusters; gl. I and II shorter than the mucronate or awned flg. . . . 114. Dactylis.
Spikelets on a short panicle, subsessile, compressed; fl. gls. keeled, tips membranous. Annuals . . . . 115. Sclerochloa.
Spikelets very small, in a narrow panicle with erect branches, awnless. Annuals . . . . . . 116. Schismus.
Spikelets ovate, in a lax pyramidal panicle, pendulous; gls. inflated, awnless, closely imbricate, many-nerved, dorsally convex . . . . 117. Briza.
Spikelets laxly panicled, few-fld.; gls. keeled, 5-nerved (3- in *P. persica*), awnless, nerves rarely meeting at the tip . . . . 118. Poa.
Spikelets laxly panicled, 1–2-fld., awnless; gls. hyaline, flg. very broad, truncate, 5-nerved, lateral nerves very short . . . . 119. Colpodium.
Spikelets panicled, many-fld., awnless; gls. obtuse, dorsally rounded, 5–9-nerved, lateral nerves short . . . 120. Glyceria.
Spikelets panicled, many-fld.; fl. gls. acute or awned, dorsally rounded, top of ovary naked or hairy . . 121. Festuca.
Spikelets panicled, 3- many-fld.; fl. gls. mucronate or awned, dorsally rounded, 5–9-nerved, top of ovary lobed villous . . . . 122. Bromus.
Spikelets few, sub-capitate, 3–5-fld.; fl. gls. 7–11-nerved, 2-fid; style very long, 2-fid . . . 123. Duthiæa.
Spikelets spicate, many-fld., mucronate or awned . 124. Brachypodium.

Tribe X. HORDEÆ. *Spikelets* 1- or more-fld., sessile, 1–2 or more seriate on the rachis of a simple spike, or partially sunk in cavities of the same; rachilla usually articulate and produced beyond the flg. gls. into a naked or glumiferous bristle; gls. awned or not, I and II opposite or subcollateral, persistent or separately deciduous, I sometimes absent or very minute.

Subtribe I. LOLIEÆ. *Spikelets* solitary at the nodes of the spike; plane of the spikelets radial to the rachis.

Spikelets 3– many-fld.; gls. coriaceous, I absent, except in the terminal spikelet . . . . 125. LOLIUM.
Spikelets 1–2-fld.; gl. I, minute or 0, II much longer than the hyaline III; spike cylindric, rachilla glabrous . . . . 126. LEPTURUS.
Spikelets 1–3-fld.; gl. I, minute or 0, II about as long as the hyaline III; spike compressed, rachilla hairy . 127. OROPETIUM.

Subtribe II. TRITICEÆ. *Spikelets* solitary at the nodes of the spike; plane of spikelets tangential to the rachis.

Fl. gls. 5–9-nerved, lateral nerves not conniving, short or ending in teeth or awns . . . . 128. TRITICUM.
Fl. gls. 5–7-nerved, lateral nerves conniving or confluent with the single terminal awn . . . . . . 129. AGROPYRUM.

Subtribe III. ELYMEÆ. *Spikelets* 2 or more, collateral or fascicled at the nodes of the spike; plane of spikelets tangential to the rachis.

Spikelets 1-fld.; empty gl. subulate, rigid . . . 130. HORDEUM.
Spikelets 2– many-fld.; empty gl. subulate, linear or oblong . . . . 131. ELYMUS.

Tribe XI. BAMBUSEÆ. Shrubby or arboreous grasses. *Leaves* flat, jointed on the sheath. *Spikelets* 1–∞-fld.; lower 2- or more gls. empty, gradually increasing in size up to the flowering, with sometimes small terminal imperfect ones. *Palea* usually large, 2-keeled (in *Melanocanna*). *Lodicules* usually 3. *Stamens* 3, 6, or ∞. *Styles* 2–3.

Subtribe I. ARUNDINARIEÆ. Palea 2-keeled; stamens usually 3; pericarp thin, adnate to the seed.

Spikelets 1– many-fld., racemed or panicled; empty gls. 1–2 . . . . 132. ARUNDINARIA.
Spikelets 1–4-fld., spicate; spathes bracteate; empty gls. 2–3 . . . . 133. PHYLLOSTACHYS.

Subtribe II. EUBAMBUSEÆ. Palea usually 2-keeled; stamens 6; pericarp thin, adnate to the seed.

Filaments free; paleas entire or slightly cleft, all 2-keeled 134. BAMBUSA.
Filaments free; paleas deeply cleft, uppermost not keeled 135. THYRS~~ACANTH~~US. ostachys
Filaments connate. Spikelets ∞-fld.; paleas all 2-keeled 136. GIGANTOCHLOA.
Filaments connate. Spikelets few-fld.; palea of upper fl. 0 or glume-like, not keeled . . . . . . 137. OXYTENANTHERA.

Subtribe III. DENDROCALAMEÆ. Palea 2-keeled; stamens 6; pericarp fleshy or crustaceous; seed free.

Spikelets 2–∞-fld., 1 only usually fertile, usually capitate in the branches of the panicle; ovary hirsute at the top, pericarp crustaceous . . . . . . 138. DENDROCALAMUS.

Spikelets 2-fld. as in *Dendrocalamus*; ovary glabrous at the top, fruit large, pericarp fleshy	139. MELOCALAMUS.
Spikelets 1-fld., loosely spiked on the branches of the panicle, bracteate; fruit small, depressed-globose; pericarp crustaceous	140. PSEUDOSTACHYUM.
Spikelets 1-fld. as in *Pseudostachyum*; fruit elongate beaked, pericarp crustaceous.	141. TEINOSTACHYUM.
Spikelets 1-fld., bracteate, crowded in globose heads; fruit oblong, beaked, pericarp thick, separable . . .	142. CEPHALOSTACHYUM.

Subtribe IV. MELOCANNEÆ. *Spikelets* 1-fld. *Palea* 0 or glume-like. *Stamens* 6–∞. *Pericarp* crustaceous or fleshy, seed free.

Spikelets in clusters on the branches of the panicle, rachilla produced far beyond the fl. gl.; fruit small, pericarp hard	143. SCHIZOSTACHYUM.
Spikelets very minute, clustered on the branches of the panicle, rachilla not produced; lodicules 0 . . .	144. DINOCHLOA.
Spikelets bracteate, crowded in unilateral spikes, rachilla not produced; fruit very large, fleshy	145. MELOCANNA.
Spikelets large, capitate or subspicate; stamens 6 or more; fruit very large, pericarp fleshy	146. OCHLANDRA.

EXCLUDED GENUS.

PRIONANTHIUM, *Desv. Opusc.* 65 t. 4, is a S. African grass, erroneously described as Indian. It was subsequently published by Nees as *Prionachne Ecklonii.*

Tribe I. PANICEÆ. (See p. 2.)

1. PASPALUM, *Linn.*

Annual or perennial grasses. *Spikelets* 1-fld., secund in simple spikes or spikelike branches of a simple panicle or raceme, articulate on the pedicel but not thickened and callous at the base, never awned. *Glumes* 3 (homologous of II III and IV in *Panicum*), with rarely a very minute lowest fourth (I of *Panicum*); I and II subequal, membranous, both sometimes very small or I (at the back of the fl gl.) absent; II. epaleate; III more coriaceous, paleate, bisexual. *Stamens* 3. *Styles* 2, free. *Grain* free within the hardened glume.—Species perhaps about 160, natives of all warm regions.

As above defined, *Paspalum* includes the *Digitaria* section of *Panicum*, which appears to me to be artificially placed in the latter genus, because of the occasional presence of a very minute scale-like glume at the base of what is the 3rd gl. of *Panicum* (that opposite the flg.). This minute glume which is present or absent even in the same species, is nerveless and never embraces that above it, as the lowest gl. always does in *Panicum* proper. One Indian species alone of *Panicum* (*P. subeglume*) has only 3 glumes, but its decompound panicle and the form of its spikelets and its affinities are with *Panicum.*

* Spikelets orbicular or broadly oblong, ovate-oblong in *P. distichum.*

1. **P. scrobiculatum,** *Linn. Mant.* i. 29; spikelets about as broad as the flat rachis $\frac{1}{12}$–$\frac{1}{8}$ in. diam. 2–4-ranked plano-convex or hemispheric, gl. I 3-nerved, II 5-nerved. *Fluegge Monogr. Gram.* 86 (Paspalus); *Trin. Diss.* ii. 122, *Gram. Panic.* 56, *Sp. Gram. Ic.* t. 143; *Kunth Enum. Pl.* i. 53; *Steud. Syn. Gram.* 21; *Roxb. Fl. Ind.* i. 278; *Grah. Cat. Bomb. Pl.* 234; *Dalz. & Gibs. Bomb. Fl. Suppl.* 97; *Thw. Enum. Pl. Zeyl.* 357; *Trim. Cat. Pl. Ceyl.* 104; *Aitchis. Cat. Panjab Pl.* 104; *Wall. Cat.* n. 8753; *Wight Cat.* n. 1601; *Duthie Field and Gard. Crops*, 8 t. 27; *Grasses N.W. Ind.* 1; *Indig. Fodd. Grass.* t. 1; *Fodd. Grass. N. Ind.* 1; *Miq. Fl. Ind. Bat.* iii. 430; *Benth. Fl. Hongk.* 408, *Fl.*

Austral. vii. 460. P. alternans, *Steud. l. c.* 26. P. auriculatum & cartilagineum, *Presl Rel. Haenk.* i. 217, 216. ? P. bifarium, *Edgew. in Journ. As. Soc. Beng.* xxi. (1853) 178. P. coloratum, *Rich. ex Doell in Mart. Fl. Bras.* ii. II. 78. P. Commersoni, *Lamk. Illustr.* i. 175. P. coromandelianum, *Lamk. l. c.*; *Kunth l. c.* 55; *Steud. l. c.* 32. P. dissectum, *Linn. Syst.* ii. 86. P. dimidiatum, *Linn. Syst. Ed.* x. 855. P. firmum, *Trin. Gram. Panic.* 105, *Sp. Gram. Ic.* t. 125; *Kunth l. c.* 60. P. flexuosum, *Klein ex Presl l. c.* 215; *Kunth l. c.* 54; *Miq. Fl. Ind. Bat.* iii. 432. P. frumentaceum, *Rottb. ex Roem. & Sch. Syst.* ii. 296; *Koen. ex Trin. Gram. Panic.* 57; *Kunth l. c.* 53. P. hirsutum, *Retz. Obs.* ii. 7; *Kunth l. c.* 33; *Miq. l. c.* 433. P. Houttuynii, *H. C. Hall ex de Vriese in Pl. Ind. Bat. Reinw.* 113. P. Kora, *Willd. Sp. Pl.* i. 332; *Host Gram. Austr.* t. 74; *Beauv. Fl. Owar.* ii. 5, t. 61; *Roxb. l. c.*; *Grah. l. c.*; *Duthie Indig. Fodd. Grass.* t. 2. P. longifolium, *Roxb. l. c.* 280; *Trin. Sp. Gram. Ic.* t. 138; *Wight Cat.* n. 1602, *Herb.* n. 1600. P. mauritanicum, *Nees ex Steud. l. c.* 26. P. metabolon, P. Metzii, and P. mollipilum, *Steud. l. c.* 19, 21, 29. P. orbiculare, *Forst. Prodr.* 7; *Fluegge l. c.* 88. P. polystachyum and P. pubescens, *Br. Prodr.* 188; *Kunth l. c.* 54, 55. P. puberulum, *Roem. & Sch. Syst.* ii. 316 (Paspalus). P. sumatrense, *Roth Nov. Sp.* 35; *Kunth l. c.* 55. P. Thunbergii, *Kunth ex Steud. l. c.* 28; *Franch. & Sav. En. Pl. Jap.* 159. P. venustum, *Forst. f. ex Roem. & Sch. l. c.* 297. P. Zollingeri, *Steud. l. c.* 28. Panicum dissectum, *Linn. Sp. Pl.* 57.—Paspalum, *Wall. Cat.* n. 8754. —*Rheede Hort. Mal.* xii. t. 84.—*Sloane Hist. Jam.* i. t. 69, f. 2.

Throughout hotter INDIA (wild or cultivated), from the Panjab eastwards and southwards to Singapore and Ceylon.—DISTRIB. All warm countries.

Annual, erect or base very shortly decumbent, 1–6 ft. high, leafy, glabrous, rarely hairy. *Leaves* acuminate; ligule short, membranous. *Peduncle* rather slender. *Spikes* 2–8, 1–3 in. long, alternate, erect or spreading; rachis $\frac{1}{12}$–$\frac{1}{10}$ in. broad, margins ciliate or serrulate. *Spikelets* in 2, rarely 3–4 rows, imbricate, glabrous or sparsely pubescent, sometimes geminate on a common pedicel; gl. I convex; II flat with two submarginal strong nerves, along the inner margins of which the gl. is sometimes marked with shallow transverse pits (whence the specific name); gl. III. with inflexed auricled margins.—I find it impossible to classify the large series of specimens of this variable plant under available varieties. Roxburgh regarded the Indian forms as 3 species, *scrobiculatum*, *Kora*, and *longifolium*. Between the first two of these he gives no differential characters, beyond that of *scrobiculatum* having erect stems 2 ft. high and being a cultivated form, whereas *Kora* is indigenous, growing on the banks of watercourses and attaining 8 ft. (? error for 3 ft., as in the description that follows) and has the stem decumbent at the base. *P. longifolium* he separates by the creeping stems, geminate terminal spikes and pitted seeds, but as Trinius describes the pitting is microscopic (as in other forms of the species). Having regard to the specimens before me, I recognize with more or less confidence (1) a form with larger dorsally tumid spikelets, which I assume to be the cultivated form (including *orbiculare*, *frumentacum*, *Kora*, *coromandelianum*, and *hirsutum*); its gl. II is either pitted or not; and (2) a form with rather smaller spikelets, often in 3–4 rows, and gl. II never pitted, to which I refer *longifolium*, *Zollingeri*, and *dissectum* (which latter is the earliest name (under *Panicum*) of the species). It abounds all over India, and is the only form of which I have seen Malayan specimens. Besides the synonyms adduced above, as to which I am pretty well assured, there may be perhaps many more to be added.

2. **P. conjugatum,** *Berg. in Act. Helvet.* vii. (1772) 129, t. 8; spikes 2 terminal or subterminal very slender, spikelets $\frac{1}{16}$ in. subsessile orbicular nearly flat, gl. II hyaline margins villously ciliate. *Sw. Fl. Ind. Occ.* i. 133; *Fluegge Monogr. Gram.* 102 (Paspalus); *Beauv. Fl. Owar.* 56, t. 92, f. 2; *Trin. Panic. Gen.* 54, *Sp. Gram. Ic.* t. 102; *Kunth Revis. Gram.* 25, *Enum. Pl.* i. 51; *Trim. Cat. Ceyl. Pl.* 104. P. bicrurulum et

bicrurum, *Saltzm. ex Doell in Mart. Fl. Bras.* ii. II. 55. P. ciliatifolium, *Trin. in Mem. Acad. Petersb. Ser.* vi. iii. II. (1835), 340. P. ciliatum, *Lam. Illustr.* i. 175. P. dolichopus, *Trin. ex Steud. Nom.* ed. 2, ii. 271. P. eriophorum, *Willd. ex Nees Agrost. Bras.* 56. P. hirsutum, *Poir. Encycl* v. 28. P. longissimum, *Hochst. ex Steud. Syn. Gram.* 19. P. nutans, *Lam. Illustr.* i. 175. P. Renggeri, *Steud. l. c.* 17. P. protensum, *Trin. Gram. Panic.* 108. P. pubescens, *Muhlb. ex Willd. Enum. Hort. Berol.* 89. P. supinum, *Bosc ex Poir. Encycl.* v. 29. P. tenue, *Gærtn. Fruct.* ii. 2, t. 80. Digitaria conjugata, *Schult. Mant.* ii. 262.—Paspalus, *Wall. Cat.* n. 8756.

CACHAR, *Keenan.* PENANG, *Curtis*, &c. SINGAPORE, *King.* CEYLON, *Thwaites* ("introd. from W. Indies.")—DISTRIB. Trop. and subtrop. regions.

Annual. *Stems* 1–2 ft., creeping and branching below. *Leaves* 4–6 by $\frac{1}{4}$ in., or less, margins of sheath above, and mouth ciliate. *Peduncle* very slender. *Spikes* 3–7 in., usually geminate and divergent, rachis glabrous. *Spikelets* imbricate, very pale, plano-convex; glumes with marginal, villous nerves, and an obsolete median; III coriaceous, apiculate, white.—A very elegant grass.

3. **P. compactum,** *Roth Nov. Sp.* 36; dwarf, hairy all over, spikes forming a pyramidal raceme, rachis slender triquetrous, spikelets $\frac{1}{20}$ in. hemispheric. *Kunth Enum. Pl.* i. 61; *Steud. Syn. Gram.* 31. P. costatum, *Hochst. in Herb. Hohenack.* n. 635. P. miliaria, *C. Muell. in Bot. Zeit.* xix. (1861), 325. P. porrigens, *Arn in Herb. Wight.* Panicum Canaræ, *Steud. l. c.* 58. Pan. imperfectum, *Roxb. ex Kunth l. c.*

KHASIA HILLS, in wet places, alt. 3–5500 ft., *Griffith*, &c. RAJPUTANA; Mt. Aboo, *Duthie.* The CONCAN and CANARA, *Jacquemont*, &c. NILGHIRI HILLS, *Lawson.*

Stem 6–10 in., decumbent, and branched below; roots stiff, wiry. *Leaves* 1–2 by $\frac{1}{3}$–$\frac{1}{2}$ in., ovate-lanceolate, acuminate, hairy on both surfaces. *Raceme* 2–4 in.; spikes many, upper gradually shorter; axils usually ciliate. *Spikelets* rather turgid, close-set, but not imbricate, pendulous by short pedicels; gl. I orbicular, obscurely 3-nerved; II narrower, margins broadly hyaline; III plano-convex, white, coriaceous, tip rounded.

4. **P. distichum,** *Linn. Amœn. Acad.* v. 391; stem creeping and rooting, leaves narrow distichous, spikes geminate, spikelets $\frac{1}{8}$ in. ovate-oblong, appressed to the rachis, gl. I and II equal acute membranous, III acute. *Burm. Fl. Ind.* 23; *Sw. Obs.* 35, t. 2, f. 1; *Gærtn. Fruct.* ii. 2, t. 80; *Kunth Enum. Pl.* i. 52; *Benth. Fl. Austral.* vii. 460; *Baker Fl. Maurit.* 431. P. brachiatum, *Trin. ex Nees Agrost. Bras.* 62. P. depressum, *Steud. Syn. Gram.* 20. P. didactylum, *Saltzm. ex Steud. l. c.* P. digitaria, *Poir. Encycl. Suppl.* iv. 316. P. distachyon, *Willd. ex Doell in Mart. Fl. Bras.* ii. II. 73. P. Fernandesianum, *Colla in Mem. Acad. Turin.* xxxix. (1836), 27. P. fissifolium, *Nees ex Doell l. c.* 104. P. furcatum, *Fluegge Gram. Monogr.* 114 (Paspalus). P. geniculatum, *Heyne in Herb. Rottl.* P. Kleinianum, *Presl Rel. Hænk.* i. 209; *Steud. l. c.* 19. P. Kora, *Forst. ex Spreng. Syst.* i. 244. P. littorale, *Br. Prodr.* 188; *Trin. Diss.* ii. 95, *Sp. Gram. Ic.* t. 112; *Kunth Enum. l. c.* 51. P. longiflorum, *Retz. Obs.* iv. 15, *ex Roxb. Fl. Ind.* i. 279; *Beauv. Fl. Owar.* ii. 46, t. 85, f. 2; *Grah. Cat. Bomb. Pl.* 231. P. maculosum, *Trin. Gen. Panic.* 98, *Sp. Gram. Ic.* t. 113. P. Michauxianum, *Kunth Revis. Gram.* i. 25. P. notatum, *Fluegge l. c.* 106. P. obtusatum, *Nees ex Doell, l. c.* 103. P. obtusifolium, *Trin. Sp. Gram. Ic.* t. 115. P. platycaule, *Willd. ex Steud. Nom.* ed. 2, ii. 272. P. repens, *Ic. Roxb.* n. 779. *ined.* P. reptans, *Poir. ex Doell l. c.* 75. P. serpentinum, *Hochst. ex Steud. l. c.* 22. P. tristachyum, *Leconte in Journ. Phys.* xii. (1820), 285. P. vaginatum, *Sw. Prodr. Veg. Ind. Occ.* 21; *Fluegge l. c.* 108 (Paspalus); *Beauv. l. c.* ii. 53, t. 92; *H. B.*

& K. Nov. Gen. & Sp. i. 91; *Trin. Diss.* ii. 94, *Panic. Gen.* 53, *Sp. Gram. Ic* t. 120; *Kunth Enum.* 52; *Steud. l. c.* 20. Panicum polyrhizum, *Presl l. c.* i. 296. Pan. vaginatum, *Gren. & Godr. Fl. Fr.* iii. 462.—Paspalus, *Wall. Cat.* n. 8757?—*Rheede Hort. Mal.* xii. t. 44.

N. W. INDIA, *Duthie.* SUNDERBUNDS, *Roxburgh, J. D. H. & T. T.* MALABAR, *Rheede.* CARNATIC, *Heyne.* MALACCA, *Griffith.* ANDAMAN ISLDS., *Prain.*—DISTRIB. warm countries.

Stems 1–6 in., erect or inclined from the long creeping base, usually stout, compressed below. *Leaves* 2–4 in., strict, flat or involute, glabrous or sparsely hairy towards the flattened sheath. *Spikes* close together, 1–1½ in., rachis narrower than the 2-seriate spikelets. *Glumes* faintly nerved.—Apparently a rarer plant in India than in most tropical countries. Andaman Isld. specimens have a stout, woody, creeping stem, with thickened nodes, and very short, erect flowering branches, with distichous, subulate, spreading leaves, and spikes partially exserted from the uppermost sheath.

** Spikelets ovoid, ellipsoid, or lanceolate.

† *Spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. long, with often a minute scale-like gl. at the base of gl. II.* (DIGITARIA, *Auct.*).

5. **P. sanguinale,** *Lamk. Illustr.* i. 176; spikes few or many, spikelets $\frac{1}{16}$–$\frac{1}{10}$ in. oblong or lanceolate acute or acuminate, gl. I.=$\frac{2}{3}$ III or shorter or 0, II 5-nerved with or without a minute basal gl., III and its palea oblong-lanceolate acuminate. *D.C. Bot. Gall.* iii. 16. P. ægyptiacum, *Poir. Encycl. Suppl.* iv. 314. P. bicorne, *Lam. l. c.* 176; *Poir. Encycl.* v. 29, *Suppl.* 306. P. blepharophorum, *Roem. & Sch. Syst.* ii. 292. P. ciliare, *DC. Fl. Fr. Suppl.* 250. P. consanguineum, *Kunth Enum. Pl.* i. 46. P. corymbosum, *Kunth Enum.* 48; *Revis. Gram.* i. 28. P. distans, *Nees ex Trin. Gram. Panic.* 83. P. filiforme, *Steud. Nom.* ed. i. 586. P. inæquale, *Link. Enum. Hort. Berol.* i. 103. P. oxyanthum, *Steud. Syn. Gram.* 27. P. reimarioides, *Brongn. Bot. Voy. Coquillo*, t. 20. Panicum sanguinale, *Linn. Sp. Pl.* 57; *Schreb. Beschr. Graes.* t. 16; *Fl. Dan.* t. 388; *Host Gram. Austr.* ii. t. 17; *Lamk. Encycl. Bot.* t. 849; *Knapp Gram. Britt.* t. 12; *Trin. Sp. Gram. Ic.* t. 93, 94, 144; *Thw. Enum. Pl. Zeyl.* 358; *Trim. Cat. Ceyl. Pl.* 104; *Aitchis. Cat. Punjab. Pl.* 161; *Duthie Indig. Fodd. Grass.* t. 8, *Grass. N. W. Ind.* 2; *Benth. Fl. Hongk.* 410, *Fl. Austral.* vii. 469; *Baker Fl. Maurit.* 435: *Boiss. Fl. Orient.* v. 433. Pan. ægyptiacum, *Retz. Obs.* iii. 8; *Roxb. Fl. Ind.* i. 293; *Dalz. & Gibs. Bomb. Fl.* 291; *Griff. Notul.* iv. 17, *Ic. Pl. Aisat.* t. 139, f. 131. Pan. adpressum, *Willd. in Ges. Naturf. neue Schrift.* iv. (1803), 193; *Kunth Enum. Pl* i. 84. Pan. bicorne and biforme, *Kunth Revis. Gram.* i. 33; *Enum* i. 83, 84. Pan. ciliare, *Retz. Obs.* iv. 16; *Kunth Enum.* i. 82; *Host Gram. Austr.* iv. t. 15; *Br. Prodr.* i. 192; *Roxb. Fl. Ind.* i. 290; *Dalz. & Gibs. l. c.* 290; *Thw. Enum.* 358; *Griff. l. l. c. c.* 32, t. 139, f. 65; *Duthie Indign. Fodd. Grass.* t. 9; Pan. commutatum, *Nees in Linnæa*, vii. (1832), 274; *Benth. Fl. Hongk.* 410. ? Pan. corymbosum, *Roxb. l. c.* 292. Pan. didactylum, *Kunth l. l. c. c.* 33, 84; *Baker Fl. Maurit.* 435. Pan. eriogonum, *Schrad. Pl. Hort. Goett. fasc.* i. *ex Schult. Mant.* ii. 253; *Kunth l. l. c. c.* 33, 82. Pan. filiforme, *Jacq. Obs.* iii. 18, t. 70 Pan. horizontale, *Mey. Prim. Fl. Esseq.* 54; *Kunth Enum.* i. 81. Pan. Linkianum, *Kunth Revis. Gram.* i. 33. Pan. pabulare, *Aitch. & Hemsl. in Journ. Linn. Soc.* xix. (1882), 190; *Boiss. Fl. Orient.* v. 434. Pan. pruriens, *Fisch. ex Trin. Diss.* ii. 77, *Gen. Pan.* ii. 77, *Sp. Gram. Ic.* t. 92; *Kunth Enum.* i. 83. Pan. radicosum, *Presl Rel. Hænk.* i. 297; *Kunth l. c.* 81. Pan. Rottleri, *Kunth Revis. Gram.* i. 33; *Enum. l. c.* 82. Digitaria ægyptiaca & biformis, *Willd. Enum. Hort. Berol.* 92, 93. D.

australis, *Willd. ex Trin. in Mem. Acad. Petersb. Ser.* vi. iii. (1835), II. 201. D. ciliaris, *Pers. Syn.* i. 85: *Ledeb. Fl. Ross.* iv. 468; *T. Nees Gen. Fl. Germ. Monoc.* n. 16; *Reichb. Ic. Fl. Germ.* i. t. 27; *Miq. Fl. Ind. Bat.* iii. 436; *Ledeb. Fl. Ross.* iv. 468. D. commutata, *Schult. Mant.* ii. 262. D. didactyla, *Willd. l. c.* 91. D. distachya, *Bojer Hort. Maurit.* 363; *Lamk. Illustr.* t. 43, f. 2. D. eriantha, *Steud. in Flora*, xii. (1829), 468. D. eriogona *Link Enum. Hort. Berol.* i. 227, *in Flora, l. c.* D. horizontalis, *Willd. l. c.* 92. D. linearis, *Pers. l. c.* D. marginata, *Link. l. c.* 102. D. nervosa, *Roem. & Sch. Syst.* ii. 473. D. nodosa, *Webb & Berth. Phyt. Canar.* iii. III. 384, t. 246. D. pruriens, *Büse in Pl. Jungh.* 379; *Miq. l. c.* 436. D. radicosa, *Miq. l. c.* 437. D. repens, *Willd. ex Kunth l. c.* 81. D. Rottleri, *Roem. & Sch. l. c.* 471. D. sanguinea, *Scop. Fl. Carniol.* 72; *Weber in Willd., Prim. Fl. Holsat.* 6. D. sanguinalis, *Scop. l. c.* ed. 2, i. 52; *Reichb. l. c.* t. 87; *Parlat. Fl. Ital.* i. 125 (*with full citations*). D sanguinolenta, *Edgew. ex Aitch. Cat. Panjab. Pl.* 161. D. setigera, *Roth ex Roem. & Sch. l. c.* 474. Dactylon sanguinale, *Vill. Delph.* ii. 69. Phalaris velutina, *Forsk. Fl. Æg. Arab.* 17. Syntherisma vulgare, *Schrad. Fl. Germ.* i. 161. *S. ciliare, Schrad. l. c.* t. 3, f. 7. ? Axonopus corymbosus, *Schult. Mant.* ii. 77.

Throughout INDIA, in dry and moist situations, ascending the Himalaya to 6000 ft. (cult. in the Khasia Hills).—DISTRIB. all warm countries.

Annual or perennial. *Stem* 2 in. to 3 ft., erect or ascending from a creeping, branching base. *Leaves* very variable, 1–12 by $\frac{1}{8}$–$\frac{1}{3}$ in.; sheaths rarely hairy, except at or near the mouth. *Spikes* 1–3 in., rarely more, usually strict; rachis trigonous or flattened, stout or slender, or winged, wings green, rarely more than twice the breadth of the midrib, margins smooth or ciliolate. *Spikelets* geminate, loosely or closely imbricate, rarely scattered; gls. often silkily hairy along the margins and nerves. The hairs in the upper spikelet of var. *ciliare* sometimes abnormally developed into a long beard or brush of curved cilia; there is every gradation between the most densely bearded and almost glabrous spikelets (see also *P. heteranthum*); gl. I (at the back of the fig. gl.) variously developed from an obscure tuft of hairs to nearly as long but not quite so broad as III, 3–5-nerved, usually silky; II 5-nerved, lateral nerves marginal, rarely all close together, and with the interspaces thickened, when the gl. appears many-nerved; III. lanceolate or oblong-lanceolate, smooth.—The above definition embraces a wide range of forms, which I believe are all referable to *P. sanguinale*. The species is one of the very commonest plants in India, and in all warm countries. A form (var. *commutatum*) is cultivated in the Khasia Hills, of which fact I find no notice in any work on Indian food grains. The following attempt to classify the Indian forms is founded on a close study of an enormous collection of specimens from all parts of India, amongst which those of Mr. C. B. Clarke are especially noteworthy. As to the result, I am satisfied that no two botanists working independently over the same materials would arrive at the same, or agree in any other; and that the results of working over a large collection from any other country would again be different. I have made no attempt to deal with the American forms, at which I have only glanced; they suggest no modification of my arrangement of the Indian.

Var. 1. *cruciatum*; spikes several 2–3 in. usually horizontal, rachis slender trigonous narrowly or rather broadly winged, spikelets ovate-oblong acute or cuspidately acuminate rather loosely imbricate quite or nearly glabrous purple or green, gl. II half as long as III ovate-oblong obtuse 3-nerved, III ovoid or obovoid rather turgid cuspidately acuminate. Panicum cruciatum, *Nees ex Steud. Syn. Gram.* 39. P. sanguinale, *Wall. Cat.* n. 8681. *K.P.*—Panicum, *Wall. Cat.* n. 8728. Digitaria cruciata, *Nees ex Herb. Strach.* v. *Winterb.* No. 3.—Himalayan region, alt. 5–8500 ft., from Iskardo and Kashmir to Sikkim and the Munnipore hills.—This form appears to me to be most nearly allied of any in habit and spikelets to *Pasp. ambiguum.*

Var. 2. *commutatum*; usually tall, stout or slender, tufted or prostrate and widely creeping below, leaves rather long, spikes few or many (up to 20) 3–6 in. long fastigiately or subcorymbosely arranged, lower often whorled or fascicled, rachis slender narrowly winged, spikelets broad rather crowded shortly pedicelled, gl. I lanceolate rather shorter and narrower than III, II with the lateral nerves glabrous or pubescent, and with usually a minute gl. at the base, III lanceolate acuminate. Pan. commutatum, *Nees in Herb. Royle*; Digit. ciliaris? *Wight Cat.* n. 1609, *Herb.* n. 3033; Pasp. paniculatum, *Herb. Jacquemont.*; Pan. sanguinale, *Herb. Strach. & Wint.* n. 1. P. ciliare, *Thwaites* (C.P. n. 861, 862).—Panicum, *Wall. Cat.* n. 8681 A (racemosum, *Herb. Heyne*) B.C. (filiforme, *Herb. Heyne*) E.F.H.I.M.N.O.P.; P. filiforme and tenuifolium, *Heyne in Herb. Rottl. l.c.* ? P. corymbosum, *Roxb. l.c.* P. filiforme, *Roxb. Ic. ined.*—Throughout India, especially in the hills, ascending to 7000 ft. along the Himalaya, and to 10,000 in Western Tibet. —(Asia, Africa.) This is the typical S. African *Pan. commutatum*, Nees, but I am doubtful as to its being the *P. corymbosum*, Roxburgh, which is described as found "only in valleys of the Circars, growing to a great size in standing waters, with culms creeping, or floating with their erect extremities above water; when found on dry ground it is in general 1–4 ft. high, *Roxb.*" A specimen of var. *commutatum* in Herb. Kew is labelled *Pan. filiforme* in Roxburgh's handwriting, but probably the ticket is misplaced.

Var. 3, *ciliare*; usually tall, slender, spikes few (2–6) 3–6 in. long, rachis slender narrowly winged, gl. I long or short ciliate, gl. II of lower spikelet, with glabrous or sparingly villous, marginal nerves, of upper spikelet with the marginal nerves densely villous or bearded with soft spreading hairs that are much broader than the gl. and often hooked at their tips. P. ciliare, *Retz.*; *Wall. Cat.* n. 8682).—Digitaria ciliaris, var. quadristachya, *Wight Herb.* n. 3034. D. commutata, *Herb. Strach. & Winterb.* n. 2. The bearded glumes may occur in other of the varieties here enumerated (as in var. *debile* from the Nicobars) as it is only when the spikelet is well advanced that the beard appears to be fully developed.—Very common.

Var. 4, *pabulare*; perennial, tall, strict, erect, spikes very many 3–7 in., rachis slender trigonous, spikelets rather distant narrowly lanceolate acuminate silkily villous white, gl. I as long as III 3-nerved, II with approximate nerves and usually a minute accessory gl. at its base, III very narrow acuminate. Pan. pabulare, *Aitchis. & Hemsl. l. c.*—The lower hills of the Panjab, Affghanistan, and Beluchistan, *Jacquemont*, &c.

Var. 5, *pruriens*; erect, glabrous, or sheaths hirsute, spikes many 3–5 in., rachis slender trigonous, spikelets narrowly lanceolate acuminate nearly glabrous, gl. I nearly as long as III, II very narrow, with approximate nerves and a minute basal gl., III very narrow acuminate. Pan. pruriens, *Fisch. l. c.*—Bengal, *Wallich* (*Cat. n.* 8681, L.). Burma, *Griffith*, Malacca, *Cuming* (n. 2397), *Maingay* (*Kew Distrib.* 1729), (Java. &c.).—Hardly different from var. *extensum.*

Var. 6, *Griffithii*; spikes several 2–4 in. long very slender often drooping, rachis filiform trigonous, spikelets linear-lanceolate solitary or in distant pairs glabrous or ciliate, pedicel of upper often longer than the spikelets, gl. I nearly as long as III narrow 5-nerved ciliate, II with ciliate lateral nerves, III narrow acuminate. Panicum Griffithii, *Arn. in Herb. Wight.* Pan. corymbosum, *Thw. Herb.* (C.P. 3800). Pan. dissitiflorum, *Nees & Arn. in Wight Cat.* n. 2341 (*not of Steud.*). Pan. sanguinale, *Wall. Cat.* n. 8681, D.G. and 8748. Pan. Rottleri, *Kunth* (nervosum, *Willd.*) *Herb. Wight.* n. 1610 (*not of Kunth Revis. Gram.*) —Panicum? *Wall. Cat.* n. 8748.—Madras, Burma, Ceylon.—This resembles *Pan. commutatum*, but has filiform spikes of scattered, longer pedicelled spikelets. It occurs in S. Africa, and no doubt elsewhere. There is no locality on Arnott's ticket of *Griffithii*, which is doubtless from the Madras peninsula, he has added to it, *Wight Cat.* n. 2057, which is Pan. horizontale, *var.* macanthrum, *Nees*, of which I have seen no specimen.

Var. 7, *extensum*; stout or slender, sheaths glabrous or hirsute, spikes few or many, rachis narrowly winged, spikelets oblong-lanceolate acuminate more or less ciliate, gl. I half the length of III or less or minute ciliate. Pan. extensum, *Nees & Arn. in Wight Cat.* n. 2340 (which is Pan. dilatatum, *Steud. l. c.* 39). Pan. nervosum, *Rottler in Ges. Naturf. Fr. Neue Schrift.* iv. (1803), 194 (*not Roxb*). P. filiforme, *Herb. Roxb.*—Common. This resembles a slender form of var. *commutatum*, with reduced gl. I.

Var. 8, *debile*; small or dwarf, 4–10 in. high, much branched from the tufted or prostrate or creeping base, glabrous or hairy, spikes 2–5 1–3 in. digitate or nearly so slender, wings of rachis narrower than the midrib, spikelets lanceolate acuminate, gl. I. from minute to nearly as long as III ciliate, II 5-nerved glabrous or ciliate. Pasp. debile, *Poir. Encycl.* v. 34 (*excl. syn.*); *Roem. & Sch. Syst.* ii. 303. Pan. debile, *Desf. Fl. Atlant.* i. 59; *Bertol. Fl. Ital.* ii. 778; *Trin. Panic. Gen.* 117. Digitaria debilis, *Willd. Enum. Hort. Berol.* i. 91; *Parlat. Fl. Ital.* i. 127.—Plains and low hills, from Bengal to Burma, Malacca, and the Andaman and Nicobar Islds. Ceylon (C.P. n. 856, 857).—*Wall. Cat.* 8683 (spikes longer, more slender). A very common dwarf form in low ground or poor soil, passing into var. *commutatum*, and the following. The specimens with gl. I nearly as long as III are typical *Pan. debile* of the Mediteranean region, but there is a gradual shortening of that gl. to a mere fimbriate scale. A minute accessory gl. at base of gl. II is present or absent. The Nicobar specimens have the bearded upper spikelet of var. *ciliare*.

Var. 9, *Rottleri*, characters of var. *debile*, but rachis of spike stouter broader green, the wings two or three times broader than the midrib, glumes broader as in *commutatum*, of which it is a dwarf form.—It resembles Host's and Reichenbach's figures of *ciliare*. Pan. Rottleri? and P. ciliare, *Wight Herb.* n. 3032 (*not Cat.* 1610), and 3033.—Common in the plains of India.

7. **P. heteranthum,** *Hook. f.*; stem stout, spikes many 6–12 in., rachis very stout rigid trigonous, spikelets $\frac{1}{5}$ in. very distant, upper long-pedicelled lanceolate, gls. rigid finely acuminate, I and II longer than III, of lower spikelet glabrous of upper villous. Panicum barbatum, *Kunth Revis. Gram.* i. 33; *Enum. Pl.* i. 84; *Steud. Syn. Gram.* 43. *Benth. Fl. Hongk.* 410. Pan. elytroblepharum, *Steud. in Zoll. Syst. Verz.* 54. Pan. eminens, *Steud. l. c.* 43. Pan. heteranthum, *Nees et Meyen in Nov. Act. Nat. Cur.* xix. *Suppl.* i. (1843), 174; *Steud. l. c.* 43. Digitaria barbata, *Willd. Enum. Hort. Berol.* 91. D. elytroblephara, *Miq. Fl. Ind. Bat.* iii. 439.

MALAY PENINSULA; Pahang, *Ridley*.—DISTRIB. Java, China.

A very remarkable species, of which I have seen only one Malayan specimen. The *spikes* appear to be irregularly produced, being leafy where their bases meet; rachis strict or flexuous, margined with green. *Lower spikelet* of each pair with very strongly nerved, acuminate, glabrous gls., and no small basal gl., upper with a rigid pedicel and minute, orbicular, naked, basal gl., its other gls. densely villous; gls. of the upper spikelet at length spreading, hairs very long, with hooked tips.—Perhaps only an extreme form of *P. saguinale*, var. *ciliare*. I have seen no authentic specimen of *P. elytroblepharum*, but Miquel's description of it accords with the Malayan plant, and he cites *P. eminens* as a synonym.

8. **P. pennatum,** *Hook. f.*; spikes 8–10 radiating elongate filiform ciliate, spikelets $\frac{1}{8}$–$\frac{1}{7}$ in. solitary or binate narrowly lanceolate subsilky, gl. I as long as III 3–5-nerved, II with or without a minute basal one nerves, 5 equidistant, III narrowly elliptic-lanceolate acuminate. Panicum pennatum, *Hochst. in Flora*, xxxviii. (1854), 197.

SIND; at Kurrachee, *Stocks*. BELUCHISTAN, *Frere*.—DISTRIB. Arab., Abyssin.

Stem 1–2 ft., branching from the suberect or prostrate base, slender. *Leaves* 1–6 by $\frac{1}{6}$ in., glabrous, or sheaths and sometimes margins and both surfaces hairy, ciliate with long hairs towards the base; ligule rather long, membranous. *Spike* 3–6 in.; rachis almost capillary, trigonous, very rarely branched, cilia very long. *Spikelets* erect, pedicel of the upper almost as long as the gls.

9. **P. ambiguum,** *DC. Fl. Franc.* iii. 16; stems diffusely decumbent or ascending, spikes 2–4 subdigitate spreading, rachis narrowly winged, pedicels nearly glabrous, spikelets imbricate $\frac{1}{12}$ in. elliptic subacute silkily pubescent with slender hairs or glabrate, gl. I nearly = III, II 5-nerved, III ovate-oblong acute. Panicum ambiguum, *Lapeyr. Hist. Abr. Pl. Pyr.* 31; *Fig. & Not. in Act. Tor.* (1854) 336, t. 11; *Sang. in Atti Linc. Ser.* I. xviii. (1865) 219, t. 421. Pan. arenarium, *Bieb. Fl. Taur. Cauc.* i. 52. Pan. distichum, *Gaudin ex Steud. Nom. Ed.* II, ii. 255. Pan. glabrum, *Gaudin. Agrost. Helvet.* i. 22; *Fl. Helvet.* i. 155; *Trin. Diss.* ii. 83; *Sp. Gram. Ic.* t. 149; *Kunth Enum. Pl.* i. 83; *Boiss. Fl. Orient.* v. 433; *Steud. Syn. Gram.* 41. Pan. humifusum, *Kunth Revis. Gram.* i. 33. Pan. Ischæmum, *Schreb. ex Schweigg. Spec. Fl. Erlang.* 16. Pan. lineare, *Krock Fl. Siles.* i. 95. Pan. sanguinale, *Pollich. Hist. Pl. Palat.* i. 57. Digitaria filiformis, *Koel. Descr. Gram.* 26; *Reichb. Ic. Fl. Germ.* t. 27. D. glabra, *Beauv. Agrost.* 160; *Ledeb. Fl. Ross.* iv. 468; *Parlat. Fl. Ital.* i. 127. D. humifusa, *Pers. Syn.* i. 85; *Engl. Bot.* t. 2613. D. linearis, *Rostaf. in Verh. Bot. Zool. Ges. Wien.* xxii. (1872) 99. D. procumbens, *Hort. ex Steud. Nom. Ed.* II, i. 508. Syntherisma glabrum, *Schrad. Fl. Germ.* i. 163.

WESTERN HIMALAYA, alt. 5–10,000 ft.; Kashmir, *Stewart*; Simla, *Thomson*. WESTERN TIBET, alt. 8–10,000 ft., *Thomson*.—DISTRIB. Europe, N. Asia.

Stems 6–12 in., usually diffusely spreading, rarely erect. *Leaves* linear-lanceolate, acute, glabrous; mouth of sheath hairy. *Spikes* 2–6, 1–2 in. long, suberect or divaricate, green or reddish. *Spikelets* variable in hairiness; the hairs often with slightly clavate tips; gl. II with rarely a minute one at the base; III quite smooth.—Very similar to var. *cruciatum* of *P. sanguinale*, but has smaller broader not acuminate spikelets, and gl. IV is never acuminate. Even more like *P. ternatum*, which is best distinguished by the bristle-like hairs on the pedicel, and short clavate ones on the outer gls.

10. **P. ternatum,** *Hook. f.*; stems erect or decumbent below, spikes 2–3 subdigitate erect or spreading, rachis narrowly winged ciliolate, spikelets $\frac{1}{12}$–$\frac{1}{10}$ in. geminate imbricate elliptic subacute villous with clavellate hairs, pedicels setulose, gl. I nearly = III or shorter, II 5-nerved nerves equidistant, III ovate-oblong acute. P. humifusum, *Heyne ex Wall. Cat.* n. 8755. Panicum ternatum, *Hochst. in Flora*, xxiv. (1841) i. *Intell.* 19; *Steud. Syn. Gram.* 40. Cynodon ternatum, *A. Rich. Tent. Fl. Abyss.* ii. 405.

WESTERN GHATS; Bababudan Hills, *Heyne*; Belgaum, *Ritchie*. KHASIA HILLS; Pomrang, alt. 4–5000 ft., *J. D. H. & T. T.*—DISTRIB. Abyssinia.

Habit of *P. ambiguum*. *Leaves* 2–5 in., linear-lanceolate or linear; sheath glabrous or with a few hairs, mouth ciliate; ligule short, membranous, truncate. *Spikes* 2–3 in., silvery-white. *Spikelets* pale, pedicels short, hispid with stiff hairs, the upper hairs half as long as the spikelet; gl. I and II with the hairs forming a dense fringe along the margins.—The Belgaum and Khasian specimens are tall and long leaved; the Bababudan ones very short. Said by Schimper to be a pest in cultivated land in Abyssinia. It so closely resembles *P. ambiguum*, that without microscopical examination of the hairs of the spikelets it is very difficult to distinguish it from that species. A Ceylon plant, from Thwaites (C.P. 2573), with larger spikelets than *P. longiflorum* (to which I doubtfully refer it), cannot be distinguished from *P. ternatum* except by the structure of the hairs of the spikelet.

†† *Spikelets* $\frac{1}{24}$–$\frac{1}{18}$ in., *with no minute gl. at base of* II.

11. **P. longiflorum,** *Retz. Obs.* iv. 15 (*non Trin.*); stems procumbent below rarely erect from the base, spikes 2– many subterminal erect or

spreading, rachis filiform, spikelets $\frac{1}{18}$–$\frac{1}{14}$ in elliptic-oblong silky with slender (not clavellate) crisped hairs, pedicels glabrous or nearly so, gl. I and II subequal or I shorter or obsolete, II 5-nerved, III ovate acuminate. *Wall. Cat.* n. 8751, C.; *Wight Cat.* n. 1603; *Baker Fl. Maurit.* 431. P. bifarium, *Edgew. in Journ. As. Soc. Beng.* xxi. (1853) 157 *nomen.* (*ex Thw. Enum. Pl. Zeyl.* 358). P. brevifolium, *Fluegge Gram. Monog.* 150 (*excl. Syn.*); *Kunth Enum. Pl.* i 48; *Wight Cat.* n. 1603, 1604; *Steud. Syn. Gram.* 41; *Benth. Fl. Hongk.* 408, *Fl. Austral.* vii. 461; *Franch. & Sav. En. Pl. Jap.* ii. 159. P. chinense, *Nees in Hook. & Arn. Bot. Beech. Voy.* 231; *Steud. l. c.* P. filiculme, *Nees ex Thw. l. c.*; *Wight Cat.* n. 1604; *Trim. Cat. Ceyl. Pl.* 104; *Franch. & Sav. l. c.*; *Duthie Grass. N.W. Ind.* 1. P. granulare, *Trin. in Spreng. N. Entdeck* ii. 47; *Kunth l. c.* 50. P. minutiflorum, *Steud. l. c.* 17; *Benth. l. c.* P. nematodes, *Schult. Mant.* ii. 71; *Kunth l. c.* 65. Panicum argyrotrichum, *Anderss. in Peters Reise Mossamb. Bot.* 548. Pan. lineare, β Pseudo Duroa, *Nees in Herb. Wight.* Pan. longiflorum, *Gmel. Syst.* 158; *Wall. Cat.* n. 8751 A. Pan. parvulum, *Trin. Pan. Gen.* 117, *in Mem. Acad. Petersb. Ser.* vi. iii. II (1835) 305. Pan. propinquum, *Br. Prodr.* 193. Pan. Pseudo-Duroa, *Nees Fl. Afr. Austr.* 21; *Wight Cat.* n. 1608. Pan. tenuiflorum, *Br. l. c.*; *Kunth l. c.* 85; *Duthie Grass. N.W. Ind.* 7, *Fodd. Grass. N. Ind.* 13. Digitaria linearis, *Schult. Mant.* ii. 264 (*ex Miquel*). D. longiflora, *Pers. Syn.* i. 85. D. Pseudo-Duroa, *Miq. Fl. Ind. Bat.* iii. 439. D. Roxburghii, *Spreng. Syst.* i. 270. D. tenuiflora, *Beauv. Agrost.* 51. Milium filiforme, *Roxb. Fl. Ind.* i. 314; *Wight Cat.* n. 1604, a.b.c. M. radiatum, *Herb. Rottl.* M. setaceum, *Herb. Koen. in Mus. Brit.* M. triracemosum, *Roxb. Ic. Ined.* n. 315. Agrostis lenta, *Ait. Hort. Kew*, i. 96. A. triracemosa, *Herb. Roxb.*—Paspalum, *Wall. Cat.* n. 8751, 8752 B.D.E.

Throughout INDIA, from Kashmir eastwards and southwards to Ceylon (C.P. 860) and Malacca; ascending the Himalaya to 6000 ft.—DISTRIB. Trop. and subtrop. regions of the Old World.

Annual or perennial? *Stems* tufted, 6–18 in., simple or branched below and rooting with ascending branches, or prostrate. *Leaves* very various, 1–1½ in. long lanceolate and divaricate, or 6–8 in. long, linear erect or spreading; sheath smooth or hairy; ligule short, truncate, membranous. *Spikes* 1–4 in., subdigitate or alternate, usually silvery-white. *Spikelets* geminate, a subsessile and pedicelled, pale green or purplish; gl. III pale, or dark brown.—The extreme forms of this species are very dissimilar, the most marked are *P. longiflorum*, proper (*brevifolium*, Fluegge), with often prostrate stems spreading from the root or creeping and rooting from 6–12 in. with short lanceolate leaves, and 2–3 divaricate spikes, and *P. minutiflorum*, Steud., with slender erect stems, narrow linear leaves and many long erect spikes, exactly as *P. Royleanum.* The hairs on the spikelets seen under the microscope are very slender and as it were crisped or wrinkled, quite unlike those of *P. ternatum* and *Royleanum.* Thwaite's CP. n. 2573 is a puzzling plant, tall, with much longer spikelets, approaching those of *P. ambiguum.* Though in this species and its allies there is no distinct gl. at the base of II, a microscopical rudiment of one may often (always?) be detected.

12. **P. Royleanum,** *Nees ex Thw. Enum. Pl. Zeyl.* 358; erect or shortly decumbent below, leaves usually erect, spikes 2–10 erect, rachis filiform, spikelets $\frac{1}{20}$–$\frac{1}{16}$ in. oblong, gl. I and II densely crisply white-tomentose with clavellate hairs, pedicel setulose, gl. I = $\frac{3}{4}$ III or shorter or obsolete, II broadly oblong subacute 5-nerved, III oblong subacute quite smooth. *Trim. Cat. Pl. Ceyl.* 158; *Herb. Strach. & Winterb. Pasp.* n. 2; *Duthie Grass. N.W. Ind.* 1. P. filiculme, *Herb. Strach. & Winterb.* n. 3

(*non Nees*). P. trachyanthum, *Nees in Herb. Wight.* Panicum puberulum, *Kunth Revis. Gram.* i. 32; *Enum. Pl.* i. 81; *Steud. Syn. Gram.* 41. Digitaria puberula, *Link Enum. Hort. Berol.* i. 223. Milium ovatum, *Heyne ex Wall. Cat.* n. 8752. Agrostis villosa, *Koen. in Herb. Mus. Brit.* Zoysia Codia, *Ham. in Wall. l. c.*—Paspalum, *Wall. l. c.* n. 8684, 8752, A.C.

Hilly districts of INDIA, from Kashmir eastwards to Munnipore, and southwards to Ceylon; ascending the Himalaya to 7000 ft.—DISTRIB. Africa trop.

Habit of the tall forms of *P. longiflorum*, almost always erect with long leaves, except in starved specimens; well distinguished from that plant (as Dr. Stapf first pointed out to me) by the short clavellate thick walled hairs of the spikelets, and the usually setulose pedicels, the longer hairs of which are sometimes half as long as the spikelet, as also by the shorter broader gl. III, which is (as in *longiflorum*) pale yellowish or dark brown and shining. *Gl.* I is often reduced to a tuft of hairs; II always = III.—This species was referred by Munro to *P. ischnocaulon*, Trin., a grass erroneously attributed to India, by its author in Sp. Gram. Ic. t. 126, but corrected to America in the corrigenda at the end of that work. Some specimens have been referred by Munro to *P. concinnum*, Steud. (Syn. Gram. 19), a very doubtful species of unknown origin. In the Ceylon specimen, C.P. 859, the pedicels are hardly setulose. In African specimens, apparently of this species, they are remarkably developed and longer than the spikelets. Specimens from Poona are tall, 2 ft. high, very robust, and branched from the base. Steudel's *P. Royleanum* is according to his description a very different plant, and judging by his reference of it to Wall. Cat. n. 8700 B. is *Panicum auritum*.

13. **P. pedicellare,** *Trin. ex Steud. Nom. Ed.* II, ii. 272; erect, spikes alternate approximate erect or spreading, spikelets $\frac{1}{20}$ in. geminate or 3–5-nate, upper of each pair half as long as their pedicels elliptic acute, gls. membranous, I and II subequal 5-nerved, III elliptic-oblong acuminate pale. P. granulare, *Trin. in Spreng. Neue Entdeck.* ii. 47; *Spreng. Syst.* i. 244; *Kunth Enum. Pl.* i. 50; *Steud. Syn. Gram.* 16. P. pedicellatum, *Nees & Arn. in Wight Cat.* 2310, *& Herb.* n. 3027; *Duthie Grass. N.W. Ind.* 1. Milium capillaceum, *Koen. ex Steud. Nom. Ed.* II, ii. 145. M. punctatum, *Koen. in Herb. Mus. Brit.* M. sanguinale, *Roxb. Fl. Ind.* i. 315 (*excl. Syn. Burm.*). M. setaceum, *Koen. in Herb. Banks.*; *Jacq. ex Trin. l. c.* M. striatum, *Herb. Ham. ex Wall. Cat.* n. 8747 A.—? Paspalum, No. 3, *Griff. Notul.* iii. 14 (*in part*), *Ic. Pl. Asiat.* t. 146, f. 1.—Panicum, *Wall. Cat.* n. 8747.

THROUGHOUT INDIA, in the plains and low hills from the N.W. Provinces to Bengal. NILGHIRI HILLS, alt. 5000 ft., *Beddome.* UPPER BURMA, *Collett.*

Stem 6–18 in., branched from the base. *Leaves* 2–6 by $\frac{1}{8}$–$\frac{1}{6}$ in., finely acuminate; ligule short, scarious. *Spikes* 3–10, 1–4 in., subterminal on the very slender peduncle, spreading; rachis capillary, trigonous; pedicels $\frac{1}{24}$–$\frac{1}{8}$ in.; gls. slightly hairy.—Munro identifies Griffiths' *Pasp.* 3 with this; it differs in the flattened rachis, red prostrate stem, and pale red spikelets, which I have never seen in *pedicellatum.* Roxburgh's excellent drawing (as *Milium sanguinale*) shows pale spikelets.

14. **P. jubatum,** *Griseb. in Goett. Nachr.* (1868) 84 (*Gesamm. Abhandl.* 301); erect, rather stout, leaves long, spikes very many lower whorled, spikelets $\frac{1}{20}$ in. in scattered pairs pale or dark purple elliptic acute, gls. finely tomentose, I rather shorter than III 3-nerved, II 5-nerved, III elliptic-lanceolate acuminate.

The KHASIA HILLS; in wet places, alt. 5–6000 ft., *J. D. H. & T. T.*, &c.

Stem 2–4 ft., shining, internodes long. *Leaves* 6–10 by $\frac{1}{6}$–$\frac{1}{4}$ in., smooth; sheath very long; ligule short rounded. *Spikes* 4–7 in., very unequal; rachis slender, trigonous. *Spikelets* subsessile; gls. thin, shining.—Pale spikes and spikelets occur on the same plant with the dark coloured.

15. **P. Perrottetii,** *Hook. f.*; stem creeping below, spikes in a pyramidal panicle lower often whorled, rachis capillary, spikelets $\frac{1}{20}$–$\frac{1}{16}$ in. oblong-lanceolate acute brown, upper of each pair long-pedicelled, gl. I and II subequal many-nerved, III elliptic-lanceolate acuminate. Panicum Wallichianum, *Wight & Arn. in Wight Cat.* n. 1607, *Herb.* 3085; *Steud. Syn. Gram.* 41; *Thw. Enum. Pl. Zeyl.* 358; *Trim. Cat. Ceyl. Pl.* 104. Pan. multibrachiatum, *Hochst. ex Steud. l. c.* 74. Pan. Perrottetii, *Kunth Revis. Gram.* ii. 395, t. 3; *Enum. Pl.* i. 96. Milium minutiflorum, *Trin. Panic. Gen.* 33.

NILGHIRI HILLS, *Wight*, &c., alt. 6000 ft., *Lawson*. CEYLON, in the Central Province, *Thwaites*.—DISTRIB. N. Africa.

Very variable in height, 6–24 in., much branched below. *Leaves* 1–6 by $\frac{1}{6}$–$\frac{1}{4}$ in., glabrous or ciliate; sheaths 1–1½ in.; ligule rounded, scarious. *Panicle* 2–3 in., peduncle filiform. *Spikes* erecto-patent, lowest ½–¾ in., upper gradually smaller; rachis trigonous. *Spikelets* geminate, lower sessile or pedicelled.—The panicled inflorescence is very different from that of *P. pedicellare*.

DOUBTFUL SPECIES.

P. GRIFFITHIANUM, *C. Mull. in Bot. Zeit.* xxix. (1861) 325. "Foot of Khasia Hills, *Griffith*."—There is no Indian *Paspalum* that at all resembles the description of this, which, according to its author, is an ally of *P. fluitans*, Ell., and other American species. There is probably an error as to the habitat and collector.

2. **ERIOCHLOA,** *H. B. & K.*

Annual or perennial grasses. *Leaves* flat. *Spikelets* secund on the spiciform branches of a raceme or panicle, base thickened and articulate on the thickened top of the short pedicel. *Glumes* 3, I and II subequal, membranous; III shorter, apiculate, hardened in fruit. *Lodicules* truncate. *Stamens* 3, anthers linear. *Styles* free. *Grain* oblong, free within the hardened glume.—Species few, tropical.

The thickened base of the spikelet alone distinguishes *Eriochloa* from *Paspalum*.

1. **E. polystachya,** *H. B. & K. Nov. Gen. & Sp.* i. 95, f. 31; spikes panicled, spikelets ⅛ in. long erect ovoid acute, gl. I & II silky or glabrous 3–5-nerved. *Lam. Encycl.* t. 909; *Kunth Enum. Pl.* i. 72, *Suppl.* 53; *Trim. Cat. Ceyl. Pl.* 104; *Duthie, Indig. Fodd. Grass.* t. 41, *Fodd. Grass. N. Ind.* 2. E. annulata, *Kunth Rev. Gram.* i. 30, *Enum.* i. 73; *Aitchis. Cat. Panjab. Pl.* 158; *Duthie Grass. N.W. Ind.* 2; *Benth. Fl. Hongk.* 409, *Fl. Austral.* vii. 463. E. punctata, *Ham. Prodr. Fl. Ind. Occ.* 5; *Kunth Enum.* i. 72, *Suppl.* 54. *Miq. Fl. Ind. Bat.* iii. 441; *Benth. Fl. Austral.* vii. 462. E. sundaica, *Miq. l. c. Suppl.* 606. E. succincta, *Kunth l. c.* i. 73. Helopus annulatus, *Nees in Mart. Fl. Bras.* ii. 17; *Wight Cat.* n. 1605; *Wall. Cat.* n. 8750. H. lævis, *Trin. ex Spreng. Neue Entdeck.* ii. 49, fig. 4. H. pilosus, *Trin. Fund. Agrost.* 104, fig. 4. H. acrotrichus, *Steud. Syn. Gram.* 100. Paspalum punctatum, *Fluegge l. c.* 127 (Paspalus); *Trin. Sp. Gram. Ic.* t. 155. P. annulatum, *Fluegge l. c.* 133 (Paspalus); *Trin. l. c.* t. 133. P. succinctum, *Trin. Diss.* ii. 19; *Sp. Gram. Ic.* t. 156. Milium Carar & M. Languchinia, *Herb. Ham. ex Wall. Cat.* n. 8750, F G. M. polystachyum, *Spreng. Syst.* i. 251. M. punctatum, *Linn. Amœn. Acad.* v. 392, *Sp. Pl.* 91; *Br. Prodr.* 188. M.

orixense, *Roxb. Ic. ined.* n. 818. M. ramosum, *Retz. Obs.* vi. 22; *Roxb. Fl. Ind.* i. 316; *Griff. Notul.* iii. 15, *Ic. Pl. Asiat.* t. 139, f. 60. Piptatherum punctatum, *Beauv. Agrost.* 18, t. 5, f. 1. P. confine, *Schult. Mant.* ii. 184 (*ex Kunth*). P. annulatum, *Raddi Agrost. Bras.* 30. Agrostis punctata, *Lamk. Encycl.* i. 58. Œdipachne punctata, *Link Enum. Hort. Berol.* i. 51.

PLAINS OF INDIA; from the Punjab to Bengal, Burma, Central India, and southward to Malacca and CEYLON.—DISTRIB. All hot countries.

Stems 1–5 ft., ascending from a creeping base. *Leaves* 3–10 by $\frac{1}{6}$–$\frac{1}{3}$ in., glabrous or hairy, ligule very short. *Spikes* forming a narrow secund compound panicle 2–6 in. long; rachis trigonous and branches pubescent villous or nearly glabrous. *Spikelets* shortly pedicelled; gl. I and II usually silky, sometimes villous, III much shortest, punctulate, very shortly awned.

3. ISACHNE, *Br.*

Perennial grasses. *Spikelets* small or minute, loosely panicled, not or obscurely articulate with the pedicel, subglobose or obovoid, 1–2-fld. *Glumes* 4, often all separately deciduous from a minute rachilla; I and II subequal, convex, herbaceous, empty; III and IV paleate, equal and both convex, or III larger flatter thinner; III male, rarely 2-sexual; IV articulate and often stipitate on the rachilla, hemispheric, coriaceous, fem. or bisexual. *Lodicules* very minute. *Stamens* 3, rarely 4–6. *Grain* free within the hardened gl. and pale.—Species about 25, tropical and subtropical.

The 2-fld. spikelets not articulate on the pedicel, with usually subequal convex empty gls., and gl. IV being articulate on the rachilla, distinguish *Isachne* from *Panicum*. I find great varieties in the persistence of the empty glume on the pedicel. Mr. Rendle informs me that he has seen traces of a fifth glume and palea in *I. australis*, which favours the claim of the genus to be referred to *Poaceæ*; and he has shown me a most minute prolongation of the rachilla at the base of the palea of gl. IV in the same species. Many of the species so run into their allies, that I regard the following limitation of most as open to question. The smooth hispid or bristly empty gls. affords no specific character, nor does the glabrous or pubescent fl. gl.

* Spikelets $\frac{1}{20}$–$\frac{1}{10}$ in long.

† Glumes I and II longer than IV, cuspidate or acuminate.

1. **I. Kunthiana,** *Wight & Arn. in Wight Cat.* n. 1659; *Thw. Enum. Pl. Zeyl.* 362; stem 6–10 in. more or less hairy, leaves ovate or ovate-oblong, panicle 2–2½ in., branches few, gl. I and II subacute or subcuspidate 7–9-nerved. *Miq. Fl. Ind. Bat.* iii. 460; *Trim. Cat. Ceyl. Pl.* 104. I. dispar, *Herb. Wight.* I. Metzii, *Hochst. in Hohen. Pl. Ind. Or.* n. 1276. I. Neesiana, *Arn. ex Steud. Syn Gram.* 96. Panicum cuspidiglume, *Steud.* Kunthianum, *Wight & Arn.* & Metzii, *Hochst. ex Steud. l. c.* 96, 95. P. obliquum, *Moritz. ex Miq. l. c.*, *Steud. l. c.* P. Burmanni, et P. marginatum, var. *Heyne ex Wall. Cat.* n. 8734, A.

NILGHIRI and TRAVANCORE HILLS, alt. 6–8000 ft., *Heyne*, &c. SINGAPORE, *Ridley*. CEYLON; in elevated districts.—DISTRIB. Java, Borneo.

Stem ascending, geniculate, branched. *Leaves* ½–2½ in., striate, spreading, smooth or scaberulous above, base cordate, midrib and nerves obscure; ligule of hairs. *Panicle* 2–2½ in.; branches short, rather stout, at length horizontal, pubescent or glabrous. *Spikelets* $\frac{1}{20}$–$\frac{1}{16}$ in., very shortly pedicelled; gl. I and II smooth hispid or bristly; III and IV subequal or III rather the largest, glabrous or puberulous.—*I. Neesiana*, is rather more glabrous, and has rather more unequal gls. III and IV, but these characters are too variable to found a distinct variety upon.

Var. *latifolia*; stem 12–16 in. stouter, leaves 2–3 by $\frac{1}{2}$–$\frac{3}{4}$ in. and sheaths sparsely hairy, midrib and 2–3 pairs of principal nerves distinct.—Nilghiri Hills, alt. 6000 ft., *Lawson;* Anamallay Hills, *Beddome.*—Almost intermediate between *I. Kunthiana* and *elatior.*

2. **I. elatior,** *Hook. f.*; nearly glabrous, stem 2–4 ft., nodes tomentose, leaves 3–4 in. ovate-lanceolate acuminate thin scabrid above, panicle 5–7 in., branches many slender, gl. I and II subcuspidate 5–9-nerved.

CEYLON, *Gardner*; Newera Ellia, *Thwaites* (CP. 314).

Included by Thwaites under *I. Kunthiana,* possibly correctly, but a very different looking plant, from its great size, thin leaves and much larger many-fld. panicle, with longer branches.

3. **I. Lisboæ,** *Hook. f.*; glabrous, stem creeping, branches ascending, leaves thin oblong-lanceolate, panicle with few horizontal stout hispidly setulose branches, gl. I and II 5-nerved hispid, III and IV equal.

The CONCAN; Mahableshwar, *Lisboa.*

Stem creeping for several inches with long wiry roots, then ascending, and 6 in. high, rather stout. *Leaves* 1–2 in. by $\frac{2}{3}$ in., recurved, thin, acute or obtuse, finely striate; base rounded, margins ciliate; sheaths loose; ligule 0. *Panicle* with the rachis quite smooth. *Spikelets* $\frac{1}{10}$ in. diam., secund on the lower surface of the branches, sessile or shortly pedicelled; gl. I and II hemispheric, 5-ribbed, tip obtusely cuspidate, a little larger than III which is glabrous.—I have seen but one specimen of this species, which probably varies like its congeners in the smoothness or hispidity of the spikelets. The 5-ribs of gl. I and II are good characters.

†† Glumes I and II much shorter than IV.

4. **I. multiflora,** *Trim. Cat. Ceyl. Pl.* 104. I. australis, *var.* multiflora, *Thw. Enum. Pl. Zeyl.* 361.

CEYLON; Oova district, alt. 5000 ft., *Thwaites.*

Stem 1–2 ft. or more, branched, and sheaths smooth. *Leaves* 4-6 by $\frac{1}{4}$–$\frac{1}{3}$ in., smooth, deeply striate, margins hardly thickened, nerves obscure. *Panicle* 4–7 in.; branches many, long, suberect, and very short pedicels subcapillary. *Spikelets* $\frac{1}{20}$ in., glabrous, glistening, purplish; gl. I oblong-ovate, 7-nerved; II as long, glabrous; III oblong-lanceolate, empty; IV much shorter, broadly oblong, obtuse, glabrous.

††† Glumes I and II about equalling IV.

§ *Glumes III and IV usually equal and similar, both hemispheric and coriaceous.*

5. **I. albens,** *Trin. Sp. Gram. Ic.* t. 25; tall, erect, leaves and sheaths smooth, panicle large pyramidal effuse, spikelets $\frac{1}{20}$–$\frac{1}{16}$ in. rather shortly pedicelled, globose. *Kunth Enum. Pl.* i. 137; *Miq. Fl. Ind. Bat.* iii. 459. *Duthie Grass. N. W. Ind.* 2 (*excl. Syn.*), *Fodd. Grass. N. Ind.* 3. Panicum albens, saxatile & Zollingeri, *Steud. Syn. Gram.* 96, 97.—Isachne, *Wall. Cat.* n. 8658.

TEMPERATE and SUBTROPICAL HIMALAYA and the KHASIA HILLS, alt. 2–6000 ft. from Simla eastward; ascending to 9000 ft. in Sikkim. BURMA, *Griffith.* PERAK, alt. 4600 ft. *Wray.*—DISTRIB. China, Malaya.

Stem 1–4 ft., branched. *Leaves* 2–8 in., very variable ($\frac{1}{3}$-1 in.) in width, linear or linear-lanceolate, glabrous or sparsely hairy beneath; margins thickened, scaberulous; midrib and 3–5 pairs of principal nerves distinct, mouth of sheath ciliate. *Panicle* 3–14 in. long, branches and pedicels capillary; gl. I and II obtuse, glabrous or sparsely setulose, usually pale green, faintly many-nerved; III and IV glabrous or pubescent, both often bisexual.

Var. *hirsuta*; leaves broad, sheaths hirsute.—Isachne, *Wall. Cat.* n. 8657.—Silhet, *de Silva*. Cachar, *Keenan*.

6. **I. scabrosa**, *Hook. f.*; leaves suberect, sheaths scabrid, panicle 2–3 in. pyramidal, spikelets $\frac{1}{20}$–$\frac{1}{16}$ in.

Khasia Hills, alt. 4500–5000 ft. *Clarke.*

Stem rambling below, then suberect, 1–3 ft., stiff, sparingly branched. *Leaves* 3–6 by $\frac{1}{3}$–$\frac{1}{2}$ in., linear-lanceolate, scabrid on both surfaces, pale and strongly-nerved beneath, margin thickened; mouth of sheath sparingly ciliate. *Panicle* very shortly peduncled; branches erecto-patent, 1–1½ in. long; pedicels capillary, smooth, tips not swollen. *Spikelets* sparsely setulose, tips rounded; gl. I and II glabrous or sparsely setose, many-nerved.—Easily distinguished from *P. albens* and *himalaica* by the scabrid leaf-sheaths; but most nearly allied to the latter.

7. **I. himalaica**, *Hook. f.*; erect, leaves linear or linear-lanceolate strict scaberulous above, margins slightly thickened, sheaths smooth, panicle pyramidal, spikelets $\frac{1}{16}$–$\frac{1}{14}$ in. globose, pedicels long capillary tips hardly thickened, gl. I and II faintly many-nerved. I. australis, *Aitchis. Cat. Punjab. Pl.* 761; *Herb. Ind. Or. Hf. & T.* (the Khasian plant); *Duthie Grass. N.W Ind.* 2, *Fodd. Grass N. Ind.* 3. I. muricata, *Munro in Herb. Strach. & Winterb.* No. 2. ?Panicum montanum, *Duthie Grass. N.W. Ind.* 4.—Isachne, *Wall. Cat.* n. 8656, D E.

Western temperate and subtropical Himalaya; in wet places, ascending to 6000 ft.; Kumaon, *Strach. & Winterb.* Nepal, *Wallich.* Peshawur, *Aitchison.* Rajaori, *Jacquemont.* Khasia Hills, in marshes, alt. 4–5 .00 ft. common.—Distrib. Affghanistan.

Stem 1–2 ft., erect from the base, stout or slender, stiff. *Leaves* always narrow ($\frac{1}{6}$-$\frac{1}{3}$ in.), nearly ensiform; nerves 9–11 pair, usually very strong, margins thickened; mouth of sheath stiffly ciliate. *Panicle* with erecto-patent branches 1–1½ in. long. *Spikelets* green or purplish; gl. I and II glabrous scabrous or bristly, III sometimes longer and flatter than IV.—Very like *I. australis*, but a larger and more rigid plant, with gl. II and III usually equal, and both hemispheric.

In a note in Munro's herbarium this is referred to the Javan *I. virgata*, Nees (Miq. Fl. Ind. Bat. iii. 462 = *Panicum rhabdinum*, Steud.), but that is described as being fastigiate spikelets, and glumes with narrowed obtuse mucronate points. It closely resembles a Sumatran plant from Beccari (n. 198).

8. **I. elegans**, *Dalzell mss.*; erect, tufted, flaccid, glabrous or nearly so, leaves 2–5 in. very narrowly linear acute soft smooth on both surfaces or scaberulous above, margins thickened, panicle subsessile contracted, branches erect, spikelets $\frac{1}{12}$–$\frac{1}{10}$ in. pedicels short, tips rounded, gl. I and II many-nerved.

The Concan, *Dalzell, Stocks*, in wet places between Poonah and Carli, *Jacquemont* (n. 143), *Woodrow* (n. 175).

Stems 8–12 in., densely tufted, soft. *Leaves* $\frac{1}{6}$–$\frac{1}{4}$ in. broad, principal nerves 0 or 1–2 on each side, margins thickened, smooth or serrulate, rarely with a few scattered bristles beneath; sheath quite smooth, mouth ciliate. *Panicle* 3–5 in., glabrous; branches ½–1 in., smooth; pedicels rarely longer than the spikelets, which are hispid green or blueish, gls. III and IV pubescent, usually equal and both hemispheric, but III sometimes longer and flatter.—The tufted flaccid habit is quite unlike *I. australis*, but may be due to local conditions.

9. **I. javana,** *Nees ex Miq. Pl. Jungh.* 376, *& Fl. Ind. Bat.* iii. 462; stout, erect, leaves 2–3 in. acute or obtuse stiff glaucous beneath, margins much thickened, panicle lax, branches and pedicels very long and slender tips obconic, spikelets obovoid $\frac{1}{14}$–$\frac{1}{12}$ in. long. Panicum batavicum, *Steud. Syn. Gram.* 96.

UPPER BURMA, *Herb. Hort. Calcutt.* MALACCA, *Maingay*; Mt. Ophir, *T. Lobb*, *Hullett*. PERAK; on Gunong Bubu, alt. 5000 ft. *Wray*.—DISTRIB. Java, Borneo.

Habit of *I. himalaica*. *Stem* 2–3 ft., quite smooth, stiff; nodes ciliolate. *Leaves* erect or erecto-patent, strict, nearly smooth on both surfaces, or sparsely hairy beneath, with 9–11 pairs of often very obscure nerves, margin smooth or serrulate; sheaths quite smooth, margins glabrous or ciliate, mouth bearded. *Panicle* 2–4 in., glabrous, lower branches 2–3 in.; pedicels more thickened at the tip than in most other species. *Spikelets* broad, smooth; gl. I and II often polished; nerves many, obscure; III and IV usually equal and both hemispheric; III rarely larger and flattened, usually male; IV fem. or bisexual; sometimes both III. and IV. are triandrous or hexandrous, in one spikelet III was triandrous and IV tetrandrous. —A much larger plant than *I. australis*.

10. **I. Clarkei,** *Hook. f.*; stem short very slender, leaves 1–2 in. ovate-lanceolate acute very thin, margins thickened serrulate, panicle 2–3 in. pyramidal, branches horizontal and pedicels capillary tips slightly thickened, spikelets $\frac{1}{30}$–$\frac{1}{20}$ in.

SIKKIM HIMALAYA; meadows in the Lachoong valley, alt. 8–11,000 ft.—*J. D. H.* MUNNIPORE; on Kohima, alt. 5800 ft. *Clarke*.

Stems 6–12 in., almost filiform, base prostrate. *Leaves* spreading, almost membranous, nerves many faint, midrib obscure; sheath and its mouth often strongly ciliate. *Panicle* long-peduncled, branches 1 in. and less. *Spikelets* scattered, hispid, green or purplish; gl. IV. hispidly pubescent.—Apparently a distinct little species with very small spikelets, but possibly a small state of *I. albens*.

11. **I. rigida,** *Nees ex Steud. Syn. Gram.* 95; stems rigid much branched from the base, leaves ½–1 in. rigid spreading and recurved ovate to ovate-lanceolate almost pungent scabrid base cordate margins thickened, panicle small pyramidal glandular, spikelets few $\frac{1}{20}$ in., pedicels long slender tip subclavate. *Miq. Fl. Ind. Bat.* iii. 461. I. Myosotis, *Benth. Fl. Hongk.* 415 (*not of Nees*). Panicum rhignon, *Steud. l. c.* P. piluliferum, *Nees ex Steud. l. c.* 24 (*fide Herb. Munro*).

TENASSERIM, *Helfer*. NICOBAR ISLDS., *Kurz*.—DISTRIB. Java, Borneo, China.

Stems 6–16 in., generally very long decumbent and naked below, internodes 1–1½ in., naked. *Leaves* deeply striate, with finely acuminate acicular tips, margins smooth ciliolate or serrulate; sheaths ¼ in., smooth scabrid or bristly. *Panicle* 1 in., peduncle stout; branches horizontal. *Spikelets* few, hispid; gl. I and II many-nerved, III and IV glabrous.—I take this to be the Javan *I. rigida*, Nees, from Steudel's description. It further agrees well enough with the descriptions of *I. firmula* and *I. monticola*, Buese.

§§ *Glume III usually flatter and thinner, and often longer than IV.*

12. **I. australis,** *Br. Prodr.* 196; stems tufted ascending, leaves short lanceolate or linear-lanceolate acute margins not or very slightly thickened, sheath smooth, panicle ovoid or pyramidal, spikelets globose $\frac{1}{14}$–$\frac{1}{12}$ in. glabrous or setose, tips of pedicels hardly thickened. *Kunth Enum. Pl.* i. 136; *Thw. Enum. Pl. Zeyl.* 361 (*in part, excl. Syn.*); *Trim. Cat. Ceyl. Pl.* 104; *Miquel Fl. Ind. Bat.* iii. 461; *Benth. Fl. Hongk.* 414, *Fl. Austral.* vii. 625; *Hook. f. Handb. N. Zeal. Fl.* 324; *Buchan. Grasses*

N. Zeald. t. 12; *Bailey Grasses Queensl.* t. 1; *Franch. & Sav. En. Pl. Jap.* ii. 164. I. atro-vivens, *Trin. Gram. Panic.* 251. I. lepidota, *Steud. in Flora,* xxix. (1846) 19; *Walp. Ann.* i. 924. Panicum antipodum, *Spreng. Syst.* i. 314; *Steud. Syn. Gram.* 94. P. atro-vivens, *Trin. ex Spreng. Neue Entdeck.* ii. 88, *Syst. Veg.* i. 318; *Kunth l. c.* 127. P. australis, *Rasp. in Ann. Sc. Nat.* v. (1825) 299. P. lepidotum, *Steud. in Flora,* xxix. (1846) 19. P. nodibarbatum, *Hochst. Pl. Hohenack.* n. 127; *Steud. l. c.* 95. P. violaceum, *Kleine ex Thiele in Linnæa,* ix. (1834) 307. Aira ischæmoides, *Koen. ex Kunth l. c.* 127. Milium globosum, *Thunb. Fl. Jap.* 49.—Isachne, *Wall. Cat.* n. 8656, A B C F.

Hotter parts of INDIA, from Assam and Burma to Central India and southward to CEYLON.—DISTRIB. Austral., N. Zeald.

Stem 8–18 in. from a creeping branching base; nodes glabrous or sparsely bearded. *Leaves* 1–3 in., rarely more, subscaberulous above or on both surfaces, margins ciliolate, nerves 0 or 2-3 very slender pairs, midrib obscure; sheaths smooth, mouth and often margins ciliate. *Panicle* 1–3 in., contracted and ovoid or pyramidal and open; branches glabrous or obscurely scaberulous, and as the pedicels very variable in length. *Spikelets* green or purplish, obtuse, smooth and polished or scabrid or setulose; gl. I and II faintly many-nerved; III and IV usually very unequal, III longer, flatter, thinner, shining; IV coriaceous, glabrous or pubescent, orbicular or broadly ellipsoid.—I. mauritiana, *Kunth,* is a very closely allied species, but has gl. III and IV equal and similar; it is *Panicum dubium* and *biflorum,* Lamk.

Var. *effusa,* Trim. Cat. Ceyl. Pl. 104; panicle pyramidal, branches longer, and pedicels spreading capillary, spikelets rather smaller.—Ceylon; Peradeniya, *Trimen.*

13. **I. miliacea,** *Roth Nov. Pl.* 58; stems very slender prostrate widely creeping and branched below then ascending, leaves small ovate-lanceolate acute margins not or faintly thickened, panicle small contracted or spreading lax-fld. spikelets $\frac{1}{20}$–$\frac{1}{18}$ in., pedicels short tips hardly thickened. *Kunth Enum. Pl.* i. 136; *Miq. Fl. Ind. Bat.* iii. 459 (*excl. some syns.*). I. Meneritana, *Poir. Encycl. Suppl.* iii. 185 (*excl. Syn.*); *Br Prodr.* 196. I. minutula, *Kunth Revis. Gram.* ii. t. 117, *Enum. Pl.* i. 137, *Suppl.* 99. I. adstans, *Miq. l. c.* 461. I. polygonoides, *Doell in Mart. Fl. Bras.* ii. II 273. I. geniculata & stigmatosa, *Griff. Notul.* iii. 41, 42, *Ic. Pl. Asiat.* t. 139, f. 206, 148, f. 2. Panicum æquatum. *Nees ex Steud. l. c.* 98. P. adstans, *Steud. l. c.* 94. P. Benjamini, *Steud. l. c.* 96, *ex Miq. l. c.* 459. P. Meneritana, *Spreng. Syst.* i. 321. P. minutulum, *Gaud. in Freyc. Voy. Bot.* 410; *Steud. l. c.* P. polygonoides, *Lam. Encycl.* iv. 742; *Decne in Nouv. Ann., Mus. Par.* iii. 352. P. patens, *Roxb. Fl. Ind.* i. 305; *Kunth l. c.* 126; *Hohenack. Pl. Ind. Or.* n. 202. P. gonatodes, *Steud. l. c.* 95. Neurachne Meneritana, *Roem. & Sch. Syst.* ii. 475 (*excl. syn.*). Aira cœrulea, var. *Herb. Heyne.*—Isachne, *Wall. Cat.* n. 8655.

Low marshy ground, from the SIKKIM TERAI, BENGAL and SILHET to BURMA and southward to MALACCA, the NICOBAR ISLDS., and CEYLON.—DISTRIB. China, the Malay and Pacific Islds., S. America.

Very variable in size; stem rarely 6–8 in. high, nodes of stem glabrous or ciliate; sheaths glabrous or sparsely hairy. *Leaves* flaccid or rather stiff, usually spreading, nerveless or nearly so, glabrous or sparsely hairy on both surfaces. *Spikelets* as in *I. australis,* but usually smaller, glabrous, rarely sparsely setose; gl. I and II 5- or more- nerved; IV glabrous or pubescent.—The small states of this plant look very different from typical *I. australis,* but larger appear to unite them by many intermediates. Trimen refers *I. Meneritana* to *I. australis,* Mr. Rendle, who has carefully compared the types of each in the British Museum, agrees with me that it goes best with *miliacea.* He also informs me that Burman's Thes.

Zeyl. 110, t. 47, f. 3, is not an *Isachne*, but resembles an *Eragrostis*; and that Plukenet's Phyt. t. 300, f. 2. (in *Herb. Sloane*) is *E. ciliaris* from the Malabar Coast. Trimen has pointed out (*Journ. Bot.* xxxiii. (1885) 271) that the "Meneritana of the Cingalese is not an *Isachne*, but is applied to *Panicum miliare* and *psilopodium*.

14. **I. dispar,** *Trin. Sp. Gram. Ic.* t. 6; stem short ascending from a branched creeping base, leaves ½–1 in. ovate-cordate to lanceolate acuminate scaberulous margins thickened, panicle oblong at length pyramidal, spikelets $\frac{1}{14}$–$\frac{1}{12}$ in., pedicels short tips thickened. *Kunth Enum. Pl.* i. 136; *Duthie Grass. N.W. Ind.* 2; *Miq. Fl. Ind Bat.* iii. 460. I. muricata, *Nees in Wight. Cat.* (*ex Miq. l. c.*). Panicum dispar, *Steud. Syn. Gram.* 96. ?P. muricatum, *Retz. Obs.* v. 18.

Nepal, *Wallich*. Sikkim Terai, *Clarke*. Rajpootana, on Mt. Aboo, *King*, *Duthie*. Nilghiri Hills, alt. 5000 ft. *Clarke*.

Stems 2–6 in. *Leaves* spreading, rather rigid, striated; midrib slender. *Spikelets* as in *I. australis*; pedicels smooth or rough; gl. I and II scabrid or setulose, nerves many, faint; III glabrous; IV pubescent.—This again is perhaps a var. of *I. australis*, of lower stature with more rigid scaberulous strongly margined leaves, sometimes ciliate at the base, and smaller panicles with shorter pedicels.

** Spikelets ⅙–¼ in. long.

15. **I. Walkeri,** *Wight & Arn. ex Thw. Enum. Pl. Zeyl.* 361; tall, slender, leaves linear-lanceolate acuminate margins thickened, panicle very lax branches and pedicels very long capillary, gls. I and II subequal 7–9-nerved. I. nilagirica, *Hochst. Pl. Hohenack.* n. 1280; *Trim. Cat. Ceyl. Pl.* 104. Panicum Walkeri, *Steud. Syn. Gram.* 97.

Nilghiri Hills; Khoondah Ghat, *Wight*; Conoor, alt. 6000 ft., *Clarke*, &c. Ceylon; forests of the Central Province, *Walker*, *Thwaites* (C.P. 282).

Stem 2–3 ft., as thick as a crow-quill, decumbent below. *Leaves* 4–6 by ⅓–½ in., rigid, smooth above, hairy beneath with a distinct midrib and 3–5 pairs of primary nerves, base narrow rounded; sheath smooth, margins above and mouth bearded. *Panicle* 8–12 in.; branches 1½–3 in., sparingly divided. *Spikelets* ⅙–⅕ in., few, very distant; gl. I and II persistent, oblong, obtuse; III and IV oblong, obtuse, glabrous.

16. **I. Gardneri,** *Benth.* in *Gen. Pl.* iii. 1100; tall, slender, leaves lanceolate acuminate margins hardly thickened, panicle very lax, branches and pedicels very long filiform, gl. I much shorter than II 3-nerved, II 5-nerved. I. nilagirica, *Trim. Cat. Pl. Ceyl.* 104 (*non Hochst.*). Panicum Gardneri, *Thw. Enum. Pl. Zeyl.* 359.

Nilghiri Hills; Madawattan, alt. 6000 ft., *Lawson*. Anamallay Hills, *Beddome*. Ceylon; Central Provinces, alt. 4–6000 ft., *Gardner*, *Thwaites*, &c.

Stem 2–3 ft., slender, quite smooth, decumbent below. *Leaves* 2–3 by ½–¾ in., thin, glabrous or sparsely hairy beneath, base broad cordate, principal nerves 3–4 pairs, very slender; mouth of sheath ciliate. *Panicle* with widely spreading sparingly divided branches; tip of pedicel thickened. *Spikelets* ⅕–¼ in., few, distant, oblong; gl. I and II obtuse glabrous or sparsely setose, I ovate; II ovate-oblong; III and IV elliptic-oblong, acute, quite smooth.

4. **PANICUM,** *Linn.*

Annual or perennial grasses. *Leaves* various. *Spikelets* small, 1–2-fld., terete or dorsally or laterally compressed, articulate on their pedicels, very rarely awned, never silkily villous; glumes 4, I and II empty, epaleate;

I smallest and fewest nerved; II. and III usually subequal, 3–∞-nerved oblong ovate or lanceolate; III paleate or not, triandrous or neuter; IV paleate, bisexual, oblong ovate or lanceolate, hardened in fruit, glabrous, dorsally convex; palea 2-nerved, membranous or hardened in fruit. *Lodicules* 2, cuneate or quadrate, rarely 0. *Stamens* 3, apically exserted. *Grain* free within gl. IV and palea.—Species very many; all warm countries.

Exceptions. In *P. subeglume*, gl. I and II are absent. In *P. Crus-galli* gl. III is sometimes produced into a rigid long or short awn. In *P. notabile, ambiguum* and *javanicum*, gl. IV is crowned with a short awn that is concealed by gls. II and III.

Under *Paspalum* (p. 10), I have given my reasons for removing to that genus the group *Digitaria*, which has hitherto been referred to *Panicum*; those for excluding *Tricholæna* and *Axonopus* will appear under the respective genera. *Ichnanthus* is excluded on less satisfactory grounds.

KEY TO THE SECTIONS.

A. Spikelets terete or dorsally compressed.

I. *Branchlets of panicle not produced beyond the terminal spikelets into awn-like bristles.*

Sect. I. Paspaloideæ. *Spikelets* 2-seriate, close-set on the undersurface of the flat rachis of a simple spike, globose or ovoid; awn 0; gl. I very small, IV more or less rugose.—Perennials. *Spikes* alternate forming a simple raceme. (*Sp.* 1–4.)

Sect. II. Echinochloa. *Spikelets* 3–4-seriate (2-seriate in *P. notabile*) crowded on the undersurface of a simple or rarely branched spike, globose or ovoid; gl. I half as long as III or shorter, II and III strongly nerved cuspidate or rigidly awned, IV hard in fruit.—Annuals. *Spikes* alternate or crowded in usually a simple raceme. (*Sp.* 5–7.)

Sect. III. Brachiaria. *Spikelets* irregularly 1–2- (rarely 3-) seriate on the slender or spiciform branches of a simple raceme, solitary or geminate, distant or crowded, ovoid or obovoid; gl. I not half as long as III (except in *P. ambiguum*), II and III subequal, awn 0, or IV with a very short awn concealed by gls. II and III. (*Sp.* 8–18.)

Sect. IV. Hymenachne. *Spikelets* small, crowded in spiciform panicles (except *P. auratum* and *curvatum*) ovoid or lanceolate, sometimes decurved; gls. usually strongly ribbed, I much shorter than III, IV usually much shorter than III, narrow, white. (*Sp.* 19–25.)

Most of the species of this section are very variable.

Sect. V. Breviglumæ. *Spikelets* very small, in pairs or fascicles on the filiform branches of a lax panicle or simple rachis, dorsally much compressed; gl. I and II both much shorter than IV, III and IV lanceolate. (*Sp.* 26, 27.)

Sect. VI. Effusæ. *Spikelets* solitary, rarely binate, sessile or pedicelled on the slender branches of a decompound usually open panicle. (See also *P. auratum* and *curvatum* in Sect. *Hymenachne.*) (*Sp.* 28–47.)

II. *Branchlets of panicle often produced beyond the terminal spikelet into a rigid awn-like bristle.*

Sect. VII. PTYCHOPHYLLUM. *Spikelets* solitary, sessile or pedicelled on the slender branches of a decompound open panicle. *Leaves* plicate. (See also *Setaria Forbesiana.*) (*Sp.* 48, 49.)

B. Spikelets strongly laterally compressed.

Sect. VIII. GIBBOSÆ. *Spikelets* very minute, panicled; gl. IV semilunar. Perennial very slender grasses. (*Sp.* 50–54.)

Sect. IX. PSEUDECHINOLÆNA. *Spikelets* rather large, distant, subsessile on a slender simple or sparingly divided rachis, often glandular. (*Sp.* 55.)

Sect. I. PASPALOIDEÆ. (See p. 27.)

1. **P. Isachne,** *Roth Nov. Sp.* 54; spikes many longer than the internodes, spikelets $\frac{1}{15}$ in. suberect oblong acute villous, gl. I minute, II and III equal faintly 3-nerved, II = IV, III paleate empty, IV oblong rounded at both ends quite smooth. *Roem. & Sch. Syst.* ii. 458; *Schult. Mant.* ii. 252; *Kunth Enum. Pl.* i. 97; *Steud. Syn. Gram.* 57. P. eruciforme, *Sibth. Fl. Græc.* i. t. 59; *Sibth. & Sm. Prodr. Fl. Græc.* i. 40; *Roem. & Sch. l. c.* 426; *Kunth l. c.* 78; *Thw. Enum. Pl. Zeyl.* 359; *Trim. Cat. Ceyl. Pl.* 104; *Duthie Grass. N.W. Ind.* 3, *Indig. Fodd. Grass.* t. 43, *Fodd. Grass. N. Ind.* 6; *Baker Fl. Maurit.* 434; *Parlat. Fl. Ital.* i 119; *Boiss. Fl. Orient.* v. 437. P. Koenigii, *Herb. Wight ex Nees Fl. Afr. Austr.* 30. P. caucasicum, *Trin. in Mem. Acad. Petersb. Ser.* 6 (1835) iii. 237, *Sp. Gram. Ic.* t. 262, *Panic. Gen.* 149: *Steud l. c.* P. Crus Galli, *Roxb. ex Wight Cat.* n. 1616 (*non Fl. Ind.*) P. pubinode, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 363; *Steud. l. c.* 57. P. Wightianum, *Arn. & Nees, ex Nees Fl. Afr. Austr.* 30. P. Wightii, *Nees l. c.* 29; *Trin. Pan. Gen.* 148; *Steud. l. c.* 58. Brachiaria eruciformis, *Griseb. in Ledeb Fl. Ross.* iv. 469. Echinochloa eruciformis, *Reichb. Ic. Fl. Germ.* t. 29; *C. Koch, in Linnæa*, xxi. (1848) 437.—Panicum, *Wall. Cat.* n. 8693.

Plains of INDIA; in watery places, from Kashmir, alt. 6000 ft., and the Panjab, to Bengal, and southward to CEYLON.—DISTRIB. Westward to Italy and N. Africa.

Stems 1–2 ft., slender, ascending from a decumbent base, much branched; nodes often bearded. *Leaves* 1-2½ in. by ¼–⅓ in., glaucous, linear-lanceolate, acuminate, flat, glabrous or softly hairy, base rounded; mouth of sheath with long hairs. *Spikes* 8–12, ½–1 in. long, erect or suberect; rachis narrower than the spikelets, ciliate. *Spikelets* subsessile, very pale; gls. membranous, I cordate; II about ⅔ shorter than IV, which is white.

2. **P. flavidum,** *Retz. Obs.* iv. 15; spikes erect shorter than the internodes, spikelets $\frac{1}{16}$–$\frac{1}{10}$ in. divaricate gibbously globose glabrous, gl. I = about ½ III suborbicular 3-nerved, II nearly = IV 7-nerved tip rounded, III oblong obtuse 3–5-nerved paleate neuter, IV broadly ovate cuspidate reticulately punctulate. *Br. Prodr.* 190; *Kunth Revis. Gram.* i. 211, t. 17, *Enum. Pl.* i. 78, *Suppl.* 60; *Trin. Panic. Gen.* 151; *Nees Agrost. Bras.* ii. 116; *Griff. Notul.* iii. 33, *Ic. Pl. Asiat.* t. 139, fig. 67; *Duthie Grass. N.W. Ind.* 3, *Indig. Fodd. Grass.* t. vi., *Fodd. Grass. N. Ind.* 7; *Wight Cat.* n. 1613, *& Herb.* n. 3059; *Wall. Cat.* n. 8692 (*excl. B, & H*

partim); *Benth. Fl. Austral.* vii. 474. P. brizoides, *Jacq. Eclog. Gram.* 2, t. 2; *Trin. Diss.* ii. 128, *Sp. Gram. Ic.* t. 158, 159; *Kunth Enum. Pl.* i. 78; *Roxb. Fl. Ind.* i. 293; *Dalz. & Gibs. Bomb. Fl.* 290; *Thw. Enum. Pl. Zeyl.* 359; *Trim. Cat. Ceyl. Pl.* 159; *Duthie Grass. N.W. Ind.* 2; *Miq. Fl. Ind. Bat.* iii. 445; *Aitchis. Cat. Panjab Pl.* 159; *Nees Agrost. Bras.* 115; *Baker Fl. Maurit.* 433. P. distans, *Trin. Sp. Gram. Ic.* t. 172. P. brizoides, *var.* distans, *Trin. Ic.* t. 159 B. P. flaccidum, *Koen. mss. in Herb. Mus. Brit.* P. floridum, *Royle Ill. Bot. Himal.* 420. P. granulare, *Lam. Ill.* i. 170, *Encycl.* iv. 740; *Trin. Diss.* ii. 129. P. Sama, *Ham. ex Wall. Cat.* 8692 F.

Plains of India; in watery places from the Panjab to Assam and Burma, ascending to 5000 ft. in Nepal and Kumaon, and southward to CEYLON.—DISTRIB. Trop. Asia and Africa.

Stem 1–4 ft., compressed, leafy, branched from the decumbent base. *Leaves* bifarious, 3–5 by $\frac{1}{6}$–$\frac{1}{4}$ in., linear-lanceolate acuminate, or ligulate with a rounded tip; sheaths compressed, lower tumid, mouth hairy; ligule 0. *Spikes* few or many, distant, $\frac{1}{2}$–1 in. *Spikelets* 2-20, very pale, sessile. *Glumes* membranous, white with green nerves; III neuter or male; IV sometimes almost orbicular, white or brownish, very minutely rough.—The var. *distans* of Trinius is a depauperate state, and occurs on the same plant as the normal. A still more depauperate form, densely tufted, with stems and leaves 2–3 in. long and very few spikelets, is Wall. Cat. 8692 D from Herb. Wight, also found in Bengal. Mr. Rendle informs me that the name *flavidum* may be a mistake for *flaccidum*, under which Koenig sent it to Retzius from Herb. Mus. Brit. where it is named *flaccidum*.

3. **P. punctatum**, *Burm. Fl. Ind.* 26; spikes longer than the internodes tip usually excurrent setiform, spikelets $\frac{1}{20}$–$\frac{1}{16}$ in. plano-convex erecto-patent glabrous, gl. I very short truncate, II = about half IV suborbicular 3-nerved tip rounded or truncate, III ovate acute 3–5-nerved neuter, IV ovate cuspidately acuminate granulate. P. fluitans, *Retz. Obs.* iii. 8 (*not* v. 18); *Roxb. Fl. Ind.* i. 293; *Griff. Notul.* iii. 25, *Ic. Pl. Asiat.* 139, f. 231; *Dalz. & Gibs. Bomb. Fl.* 290; *Thw. Enum. Pl. Zeyl.* 339; *Trim. Cat. Ceyl. Pl.* 104; *Aitchis. Cat. Panjab. Pl.* 159; *Duthie Grass. N.W. Ind.* 4, *Indig. Fodd. Grass.* t. 44, *Fodd. Grass. N. Ind.* 7; *Baker Fl. Maurit.* 433; *Boiss. Fl. Orient.* v. 437; *Steud. Syn. Gram.* 59; *Nees Agrost. Bras.* 115. P. brizoides, *Retz. l.c.*; *Rottl. in Naturf. Fr. l. Ges. Neue Schrift.* iv. (1803), 211; *Wall. Cat.* n. 8690; *Wight Cat.* n. 1614. P. fluitans, *Herb. Madr. Wall. Cat.* n. 8692 B. P. granulare, *Bojer Hort. Maurit.* 364. P. mucronatum, *Roth Nov. Sp.* 45; *Steud. l.c.*; *Nees Agrost. Bras.* 116. P. paspaloides, *Wall. l. c.* n. 8691 A (*partim*), B.

Marshes throughout INDIA, from the Panjab to Assam, and southwards to Malacca and CEYLON.—DISTRIB. Malaya, Mauritius, trop. and N. Africa.

Perennial, quite glabrous. *Stem* 2–4 ft., base floating, rooting at the nodes; lower internodes very stout, spongy. *Leaves* 4–8 in., linear, acute or acuminate; lower sheaths dilated; ligule a ring of hairs. *Spikes* many, $\frac{1}{2}$–1 in., distant, sessile, secund, appressed to the glabrous rachis, very pale; rachis about $\frac{1}{16}$ in. broad, margin quite smooth, tip free acicular as long as the upper spikelet. *Spikelets* $\frac{1}{12}$–$\frac{1}{10}$ in. long, imbricate, sessile, ovate-oblong. *Glumes* membranous, IV as long as III.—Mr. Rendle informs me that he has examined in the British Museum the specimen (in Herb. Sloane) on the figure of which Burman founded *P. punctatum*, and that it is the same as *P. fluitans*, Retz. And further, that the name *fluitans* is a ms. one of Koenig, and was no doubt sent by him to Retz, who says that he received the plant from Koenig. As to the rival claims of *punctatum* and *fluitans* for adoption, the former (published in 1768) has a quarter of century's priority; but whereas the *P. fluitans* has had more than a century of recognition in all countries, *P. punctatum* has never till now been recognized, nor could it have been from Burman's description only. Under these circumstances, and taking into consideration the facts, that Retz described two different plants under the name of *fluitans*, and that *punctatum* has been applied to no other species, I have adopted the latter.

4. **P. paspaloides,** *Pers. Syn.* i. 81 (paspalodes); spikes erect longer than the internodes, spikelets $\frac{1}{20}$–$\frac{1}{16}$ in. erecto-patent subglobose glabrous, gl. I very short suborbicular retuse, II nearly = IV strongly 5-nerved tip rounded, III broadly ovate acute 5-nerved paleate neuter, IV oblong subacute nearly smooth. *Kunth Enum. Pl.* i. 77; *Trin. Pan. Gen.* 153. *Wall. Cat.* 8691 (*in part*); *Steud. Syn. Gram.* 60; *Boiss. Fl. Orient.* v. 436. P. affine, *Nees Agrost. Bras.* 113. P. appressum, *Doell in Mart. Fl. Bras.* ii. II 184. P. beckmanniæforme, *Mikan ex Trin. in Spreng. Neue Entdeck.* ii. 83; *Spreng. Syst.* i. 309. P brizæforme, *Presl Rel. Hænk.* 302; *Steud. l. c.* 60. P. brizoides, *Lamk. Ill.* i. 170 (*not Trin. or Jacq.*). P. carnosum, *Saltzm. ex Steud. l. c.* P. fluitans, *Retz. Obs.* v. 18; *Miq. Fl. Ind. Bat.* iii. 455. P. numidianum, *Sieb. ex Schult. Mant.* ii. 267 (*not Lamk.*). P. truncatum, *Trin. Diss.* ii. 130, *Sp. Gram. Ic.* t. 168 (*not* t. 172). Paspalum adpressum, *Pers. Syn.* i. 85; *Rich. ex Lamk. l. c.* 176. Digitaria affinis, *Roem.* and *Sch. Syst.* ii. 470.

KUMAON, *Strachey & Winterbottom*, alt. 5000 ft. UPPER GANGETIC PLAIN; Delhi, *Clarke*. BUNDELKUND, *Duthie*. SCIND, the CONCAN, MALABAR and TRANQUEBAR, *Heyne*, &c. CEYLON, *Walker*, &c.—DISTRIB. Affghanistan, Arabia, Afric. and Amer. trop.

Perennial, stem glabrous; prostrate, usually floating below and rooting at the nodes. *Leaves* spreading, linear, acuminate acute or obtuse, lower sheaths dilated. *Spikes* $\frac{1}{2}$–1 in., appressed to the narrow, compressed, setulose rachis. *Spikelets* subsessile, turgid. *Glumes* membranous.—Habit of *P. punctatum*, which it closely resembles, but differs in the rachis of the spikes not produced at the tip with a few imperfect terminal spikelets, in the size of gl. II, in paleate III, and smooth IV.—*P. brizoides*, Lamk., is the earliest name, but it has been so promiscuously applied that it is better abandoned.

Sect. II. ECHINOCHLOA. (See p. 27.)

5. **P. Crus-galli,** *Linn. Sp. Pl.* 56; stem erect, leaves linear flat glabrous or scaberulous, raceme contracted or pyramidal, spikes many 2–4 in. often secund simple or subcompound, rachis setulose, spikelets $\frac{1}{12}$–$\frac{1}{8}$ in. (*excl. awn*) subglobose hispid or scabrid rarely glabrous, gl. I = $\frac{1}{4}$–$\frac{1}{3}$ III acute 3–5-nerved, II = III mucronate or shortly awned, III paleate male or neuter awned, awn short or long rigid scabrid, IV ovoid obtuse or cuspidate and palea coriaceous shining white. *Fl. Dan.* t. 852, & t. 1564; *Host Gram. Austr.* ii. 15, t. 19; *Encycl. Bot.* t. 276; *Knapp Gram. Britt.* t. xi.; *Reichb. Ic. Fl. Germ.* t. 29; *Trin. Sp. Gram. Ic.* t. 161, 162; *Wall. Cat.* n. 8687 (*excl. I.*); *Thw. Enum. Pl. Zeyl.* 359 (*excl. Syn. colonum*); *Trim. Cat. Ceyl. Pl.* 104; *Duthie Grass. N.W. Ind.* 3, *Indig. Fodd. Grass.* t. 5, *Fodd. Grass. N. Ind.* 4; *Miq. Fl. Ind. Bat.* iii. 464; *Benth. Fl. Hongk.* 411, *Fl. Austral.* vii. 479; *Boiss. Fl. Orient.* v. 435; *Franch. & Sav. En. Pl. Jap.* ii. 160; *Griseb. Fl. Brit. W. Ind.* 546. P. Burmanni, *Bieb. Fl. Taur. Cauc.* iii. 57, *ex Link. Hort. Berol.* i. 204. P. corvipes, *Stokes Bot. Mat. Med.* i. 141. P. digitatum, *Gilib. Exercit.* 517. P. dubium, *Sieb. ex Steud. Nom. Ed.* II, ii. 256, *Syn. Gram.* 46. P. echinatum, *Willd. Enum. Hort. Berol.* 1032; *Trin. Sp. Gram. Ic.* t. 162; *Jacq. Eclog. Gram.* ii. 28, t. 20. P. hirtellum, *Walt. Fl. Carol.* 72. P. hirti-

calycinum, *Steud. Nom. Ed.* II, ii. 257. P. hispidulum, *Lamk. Encycl.* iv. 744 (*non Del.*); *Retz Obs.* v. 18; *Roxb. Fl. Ind.* i. 303 (*fid. Ic. Pict.*); *Wall. Cat.* 8688 A.; *Wight Cat.* n. 2042; *Steud. Syn. Gram.* 47; *Franch. & Sav. l. c.* 160. P. hispidum, *Forst. Prodr.* 7; *Nees Agrost. Bras.* 257. P. horridum, *Saltzm. ex Steud. l. c.* 47. P. Hosti, *Bieb. l. c.* P. limosum, *Presl ex Nees l.c.* P. longisetum, *Torr. in Am. Journ. Sc. Ser.* I iv. (1822) 58. P. mirabile, *Braun Del. Sem. Hort. Carlsruhe* (1846). P. muricatum, *Michx. Fl. Bor. Am.* i. 47. P. oryzinum, *Gmel. Syst.* i. 157; *A. Braun in Ind. Sem. Hort. Berol.* 1851. P. pilosum, *Dalz. & Gibs. Bomb. Fl. Suppl.* 98. P. sabulicolum, *Nees Agrost. Bras.* 258. P. scabrum, *Lamk. Ill.* i. 171; *Wight Cat.* n. 1648; *Steud. l. c.* 47. P. stagninum, *Retz. Obs.* v. 17; *Host Gram. Austr.* iii. t. 51; *Koen. in Naturf. l. c.*; *Roxb. Fl. Ind.* i. 295; *Nees in Mart. l. c.* 26; *Griff. Notul.* iii. 17; *Wall. Cat.* n. 8688; *Wight Cat.* n. 1649. P. Walteri, *Pursh Fl. Am. Sept.* i. 66. Oplismenus Crus-galli, *Dum. Obs. Gram. Belg.* 138; *Kunth Revis. Gram.* i. 44, *Enum. Pl.* i. 143; *Host l. c.* ii. t. 19; *Trin. Sp. Gram. Ic.* t. 161; *Dalz. & Gibs. Bomb. Fl.* 292. O. Crus-pavonis, *H. B. & K. Nov. Gen. & Sp.* i. 108. O.? dubius, *Kunth Rev. Gram.* i. 44, *Enum.* i. 143. O. limosus, *Presl Rel. Hænk.* i. 321; *Kunth Enum.* i. 144. O. longisetus, *Kunth Revis. Gram. l. c.* O. muricatus, *Kunth l. c.* 44. O. sabulicolus, *Kunth Enum.* i. 145. O. scaber, *Kunth Rev. Gram.* i. 44. O. stagninus, *Kunth Revis. l. c.*, *Enum. l. c.*; *Dalz. & Gibs. l. c.*; *Aitchis. Cat. Punjab Pl.* 161; *Miq. l. c.* 464. Echinochloa commutata, *Schult. Mant.* ii. 267. E. Crus corvi, *Beauv. Agrost.* 53. E. Crus-galli, *Beauv. l. c.*; *T. Nees Gen. Fl. Germ. Monocot.* I t. 21; *Reichb. Ic. Fl. Germ.* t. 29. E.? dubia, *Roem & Sch. Syst.* i. 479. E. hispida, *Schult. l. c.* E. hispidula, *Nees in Royle Ill. Bot. Himal.* 416, 420; *Dalz. & Gibs. l. c. Suppl.* 98. E. stagnina, *Beauv. l. c.* Orthopogon Crus-galli & Retzii, *Spreng. Syst.* i. 307. Ischæmum abbreviatum & fasciculatum, *Herb. Ham. ex Wall. Cat.* n. 8688. Digitaria hispidula, *Willd. Enum. Hort. Berol.* 91. Milium Crus-galli, *Moench. Meth.* 202.

Throughout INDIA, especially in wet places and rich soils—DISTRIB. all warm countries.

Annual. *Stem* 1–3 ft., stout or slender, erect or decumbent below, simple or branched. *Leaves* flat, up to an inch broad, glabrous or hairy; ligule 0. *Raceme* 4–8 in., usually inclined, or drooping. *Spikes* sessile or subsessile, upper gradually shorter, erect erecto-patent or rarely decurved. *Spikelets* densely packed in 3–5 rows, turgid; gl. I not awned; II and III subequal, usually 5-nerved, awn of III sometimes 1½ in. long; IV from orbicular to broadly oblong.—Amongst the innumerable varieties of *P. Crus-galli*, I find it impossible to find characters constant enough for their limitation. Of exceptional states one with almost glabrous spikes is *Echinochloa glabrescens* (Munro mss.); it has large spikelets and cuspidate gls. It is Wallich's n. 8687 E. B. C. H., and has been collected in the Western Himalaya, Khasia Hills and elsewhere. Another is *Ischaemum glabrescens*, Ham. ex Wall. Cat. n. 8688 D, with the stem nearly as thick as the little finger, solitary or 2-nate spikes, and spikelets with tubercle-based bristles. Thwaites CP. 900 and 3237, from Ceylon is a third, it has very broad leaves, and the rachis of the spikes is villously hairy. *P. mirabile*, Braun, is a remarkable plant, with 3-fld spikelets, the lower fl. paleate and neuter, two upper hermaphrodite. Some forms with cuspidate, very shortly awned spikelets pass into *P. colonum*, through var. *frumentaceum*, and it is not unlikely that some of the synonyms placed under *P. Crus-galli* should be transferred to *P. colonum*, and *vice versa*.

Var. *frumentaceum*; tall, robust, spikes thickened incurved sometimes corymbose with densely crowded unawned spikelets, otherwise as *P. Crus-galli*. P. frumentaceum, *Roxb. Fl. Ind.* i. 304; *Schult. Mant.* ii. 230; *Trin. Sp. Gram. Ic.* t. 164; *Diss.* ii. 132; *Wall. Cat.* n. 8686; *Wight Cat.* n. 1617; *Duthie Grass. N.W. Ind.* 4, *Field & Gard. Crops* 3, t. 24, *Fodd. Grass. N. Ind.* 8; *Franch. & Sav. En. Pl Jap.* ii. 161. P. Crus-galli, *Wall. Cat.* n. 8687, C. G. P. Crus-galli, *var.* frumentaceum *Trim. Cat. Ceyl. Pl.* 104. P. grossum, *Salisb. Prodr.* 18. P. segetale, *Herb. Roxb.* Oplismenus frumentaceus, *Kunth Revis. Gram.* i. 45, *Enum. Pl.* i. 146; *Dalz. & Gibs. Bomb. Fl. Suppl.* 98. Echinochloa frumentacea, *Link Enum. Hort. Berol.* i. 204; *Aitchis. Cat. Panjab Pl.* 161; *Miq. Fl. Ind. Bat.* iii. 465.—Cultivated in the hotter parts of Asia and Africa.—Roxburgh (*Fl. Ind. l. c.*) says of *P. hispidulum*, which is undoubtedly referable to *P. Crus-galli*, "it comes very near my *P. frumentaceum*, and may probably be the same in its wild state."

6. **P. colonum,** *Linn. Syst. Ed.* x. 870; stem rather slender decumbent or shortly creeping below, leaves narrow scaberulous, raceme contracted, spikes suberect 1–1½ in. usually distant, rachis pilose, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. acute or subcuspidate glabrous or hispidulous, gl. I = ½ III or shorter acute 3–5-nerved, II and III subequal acute, III paleate, IV ovoid or oblong obtuse or acute and palea coriaceous white. *Jacq. Eclog. Gram.* t. 32; *Ehret. Ic. Sel.* t. 3, f. 3; *Beauv. Agrost.* t. x. f. 6; *Trin. Sp. Gram. Ic.* t. 160; *Steud. Syn. Gram.* 46; *Wall. Cat.* n. 8685; *Trim. Cat. Ceyl. Pl.* 104; *Duthie Grass. N.W. Ind.* 3, *Indig. Fodd. Grass.* t. 4, *Fodd. Grass. N. Ind.* 4; *Benth. Fl. Hongk.* 411, *Fl. Austral.* vii. 478; *Boiss. Fl. Orient.* v. 435; *Franch. & Sav. En. Pl. Jap.* ii. 160; *Griseb. Fl. Brit. W. Ind.* 545. P. arabicum, *Nees ex Steud. Nom. Ed.* II, ii. 251, *Syn. Gram.* 63. P. brizoides, *Linn. Mant.* i. 184. P. cæsium, *Nees in Hook. & Arn. Bot. Beech. Voy.* 235; *Steud. l. c.* 47. P. confertum, *Herb. Rottl. ex Wall. Cat.* n. 8687 B. P. Crus-galli, *Wall. Cat.* n. 8687 I; var. colonum, *Coss. Expl. Alger.* 28; var. minor, *Thw. Enum. Pl. Zeyl.* 359. P. cuspidatum, *Roxb. Fl. Ind.* i. 298; *Duthie Grass. N.W. Ind.* 3; *Steud. l. c.*; *Fig. & de Not. in. Mem. Acad. Tor.* (1854) 340, t. xiii. f. 1–16. P. Daltoni, *Parlat. ex Webb in Hook. Niger Fl.* 185; *Steud. l. c.* P. flaccidum, *Wall. Cat.* n. 8692 H (*in part*). P. grossarium, *Griff. Notul* iii. 36, *Ic. Pl. Asiat.* t. 139, f. 113. P. hæmatodes, *Presl Fl. Sic.* i. 43; *Steud. l. c.* P. numidianum. *Presl Cyp. & Gram. Sic.* 19. P. Petiveri, *Kotsch. ex Griseb. Fl. Brit. W. Ind.* 545. P. pictum, *Kœn. in Naturf.* xxiii. (1788) 204; *Wight Cat.* n. 1648; *Nees in Mart. Fl. Bras.* ii. 120? P. Pseudo-colonum, *Roth Nov. Sp.* 147; *Steud. l. c.* 46. P. semiverticillatum, *Herb. Rottl.* (*non Rottl. in Ainsl. Mat. Med.*). P. tetrastichum, *Forsk. Fl. Æg. Arab.* 19. P. zonale, *Presl Prodr. Fl. Sic.* i. 82. Oplismenus colonus, *H. B & K. Nov. Gen. & Sp.* i. 108; *Kunth Enum. Pl.* i. 142; *Dalz. & Gibs. Bomb. Fl.* 291; *Aitchis. Cat. Punjab Pl.* 161. O.? cuspidatus, *Kunth Revis. Gram.* i. 45, *Enum.* i. 147. O. Pseudo-colonus, *Kunth l. l. c.* 44, 142. Digitaria? cuspidata, *Schult. Mant.* ii. 265.—Panicum, *Wall. Cat.* n. 8694, 8726.—*Sloane Hist. Jam.* i. t. 64, f. 3.

Throughout INDIA and Ceylon, ascending the Himalaya to 6000 ft.—DISTRIB. all warm countries.

In its typical form *P. colonum* differs from *Crus-galli* by the characters given above, but there is a gradual transition of one into the other; and the cultivated var. *frumentaceum* has been assigned to both, having the unawned spikelets of the former, and the broad leaves robust habit and long crowded spikes with crowded spikelets of the latter. I find it very difficult in many cases to decide whether to refer certain specimens to the one or to the other, and am not at all confident that the synonymy of the two is in all cases right. Both Cosson and Thwaites regard *colonum* as a form of *Crus-galli*.

7. **P. notabile,** *Hook. f.*; spikes much longer than the internodes, rachis scabrid, spikelets ⅛ in. 2–3-seriate silkily hairy, gl. II subaristately

acuminate, III paleate male, IV orbicular-oblong rugulose shortly awned. —Panicum, *Wall. Cat.* n. 8723.

BURMA; Petroleum wells of the Irawaddi, *Wallich.*

Stem 18–24 in., robust and foliage of *Crus-galli*, nodes pubescent. *Leaves* 3–5 in., finely acuminate, ciliate towards the base; sheaths sparsely hairy; ligule 0. *Panicle* 5 in., rachis flattened and angular, much narrower than the spikelets. *Spikelets* erect, imbricate, pale, sparsely silkily pubescent; gls. membranous, I=$\frac{1}{2}$ III, broadly ovate, obtuse, 3-nerved; II ovate, finely beaked, 5-nerved, hirsute; III very broadly obovate, cuspidately acuminate, the inflexed margins densely ciliate with long erect hairs; awn of IV as long as itself, strict, scabrid.—A very remarkable grass, with the habit of *P. Crus-galli*, but with the rugulose awned gl. IV of *P. jaranicum*, and hence intermediate between the sections *Echinochloa* and *Brachiaria*.

Sect. III. BRACHIARIA. (See p. 27.)

See *P. turgidum* in Sect. EFFUSÆ.

* Gl. I nearly as long as III; IV shortly awned.

8. **P. ambiguum,** *Trin. Gen. Panic.* 155; leaves narrow hairy base rounded, spikes few suberect, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in., glabrous, gl. I ovate acute 5-nerved, II ovate-lanceolate acuminate 7-nerved, III epaleate, IV oblong minutely rugulose. *Steud. Syn. Gram.* 61. P. infidum, *Trim. Cat. Ceyl. Pl.* 104 (*non Trin.*). P. javanicum, *Thw. Enum. Pl. Zeyl.* 358. P. sanguinale, *Burm. Fl. Ind.* t. 10, f. 2 (*non descr.*). Urochloa paspaloides, *Presl Rel. Hænk.* i. 318 (*fid. Trin.*); *Kunth Enum. Pl.* i. 75.

BURMA; Mergui, *Griffith.* CEYLON, *Gardner*, *Thwaites* (CP. n. 858, 3244).—DISTRIB. Mascarene, Malay and Pacific Islds.

Annual. *Stems* 1–2 ft., slender, much branched from the base; nodes glabrous or puberulous. *Leaves* 3–6 by $\frac{1}{6}$–$\frac{1}{3}$ in., acuminate; sheaths glabrous or margins ciliate; ligule a tuft of hairs. *Spikes* 3–4, 1–2 in.; rachis slender, triquetrous, glabrous or with a few hairs at the nodes. *Spikelets* 2-seriate, alternate, suberect; palea of IV with green nerves; awn of IV concealed by II and III.—The subequal gls. I and III will distinguish this from all other species of the *Brachiaria* section. *P. ambiguum*, Fig. & de Notar. is a very different plant. Presl describes two varieties in the Philippines; *α* lower gl. hardly half as long as the others; *β* glumes subæquilong. I have seen no Indian or other specimens answering to *α*.

** Gl. I much shorter than III; IV often abruptly apiculate.

§ Spikelets $\frac{1}{20}$–$\frac{1}{16}$ in.

9. **P. prostratum,** *Lamk. Illustr.* i. 171, *Encycl.* iv. 745; leaves short, base broad amplexicaul and sheaths ciliate, spikes usually crowded suberect, rachis trigonous, pedicels with long cilia, spikelets $\frac{1}{20}$–$\frac{1}{16}$ in. crowded subsessile 2–3-seriate ellipsoid glabrous, gl. I very short semilunar, II ovate acute 5–7-nerved, III 5-nerved paleate, IV obovate apiculate minutely rugulose. *Trin. Diss.* ii. 150, *Panic. Gen.* 158, *Sp. Gram. Ic.* t. 184, 185; *Kunth Enum. Pl.* i. 89, *Suppl.* 68; *Steud. Syn. Gram.* 62; *Thw. Enum. Pl. Zeyl.* 359; *Trim. Cat. Ceyl. Pl.* 105; *Aitchis. Cat. Panjab. Pl.* 160; *Duthie Grass. N.W. Ind.* 6, *Indig. Fodd. Grass.* t. 45, *Fodd. Grass. N. Ind.* 11; *Benth. Fl. Austral.* vii. 476; *Griseb. Fl. Brit. W. Ind.* 540. P. barbatum, *Lamk. Illustr. l. c.* P. cæspitosum, *Sw. Fl. Ind. Occ.* i. 146. P. crispum, *Llanos Fragment.* 42. P. hirsutum, *Heyne ex Wall. Cat.* n. 8734 B. P. marginatum, *Vahl ex Herb. Rottl. et ex Wall. Cat.* n. 8732

B. P. procumbens, *Nees Agrost. Bras.* 109; *Herb. Wight*, n. 3052. P. repens, *Burm.* var. alt. *Fl. Ind.* t. 11, *f.* 1; *Rottl. in Neue Schrift.* iv. (1803) 182. P. setigerum, *Herb. Roxb. ex Wall. Cat.* n. 8733 A. D. P. Sieberi, *Link. Hort. Berol.* i. 207. P. viaticum, *Saltzm. ex Doell. in Mart. Fl. Bras.* ii. II 155.—Panicum, *Wall. Cat.* n. 8733 A—D. 8734 B, C. D. Gramen paniceum minus, &c. *Petiv. ex Scheuchz. Agrost.* 51 (*non P. Petiverii*, Trin.).

PLAINS OF INDIA, from the Panjab to Assam and Burma, and southward to CEYLON.—DISTRIB. Tropics generally.

Annual or perennial, usually small; stem 4–18 in., creeping below; nodes glabrous. *Leaves* 1–2 in., up to $\frac{3}{4}$ in. broad, ovate-lanceolate, acuminate; sheaths ciliate; ligule 0. *Panicle* usually shortly peduncled. *Spikes* subsecund, at length spreading; rachis scabrid and hairy. *Spikelets* pale, rather turgid; pedicels with cilia longer than the spikelets; gl. I nerveless or 3-nerved; palea of III oblong, acute.—A common Bengal plant, of which and *P. villosum* I find it impossible to unravel the synonymy with confidence. Nees (*Agrost. Bras.* 109) includes under *procumbens*, *repens*, Burm. & Roxb. (*not Linn.*), *prostratum*, β Lamk., *setigerum*, Retz & Roxb., *umbrosum*, Retz & Roxb., *grossarium*, Koen. (*not Linn.*), *barbatum*, Lamk., & *subcordatum*, Roth. Wight (Cat.) includes under *procumbens*, Nees, besides most of the above, *P. hirtum*, Roth (*Rothii*, Spreng.) which is *Oplismenus compositus*. Mr. Rendle informs me that Petiver's plant, which Trinius cites as the type of his *P. Petiverii*, is *P. prostratum*, Lamk., but that the *P. Petiverii* of Trinius' Icones is *P. grossarium*, Koen., *not Linn.*), which I refer to the *P. ramosum*.

Var. *rigidum*; stem very stout wholly prostrate much branched, leaves $\frac{1}{2}$ in. triangular-ovate rigid pungent ciliate with long hairs.—*Wall. Cat.* n. 8723 (*in part*). Calcutta, *Clarke*? Burma, *Wallich*. (The specimen has evidently been misplaced in the sheet of *P. notabile.*)

Var. *burmanicum*; leaves sparsely hairy beneath, gl. II and III puberulous.—Burma, *Collett*.

10. **P. villosum**, *Lamk. Illustr.* i. 173, *Encycl.* iv. 745; leaves ovate-oblong obtuse or acute densely pubescent on both surfaces base rounded, spikes secund erect tomentose, spikelets $\frac{1}{20}$–$\frac{1}{16}$ in. ellipsoid glabrous or tomentose, gl. I very short semi-lunar nerveless, II ovate acute 7-nerved, III ovate-oblong acute paleate, IV obovate abruptly apiculate minutely rugulose. *Kunth Enum. Pl.* i. 98; *Herb. Wight* n. 3053. ?P. Careyanum, *Nees Agrost. Bras.* 118. P. coccospermum, *Steud. Syn. Gram.* 62; *Thw. Enum. Pl. Zeyl.* 359; *Trim. Cat. Ceyl. Pl.* 105. P. grossarium, *Roxb. Fl. Ind.* i. 297; *Hochst. in Herb. Hohen.* n. 919. P. nanum, *Nees in Herb. Royle, ex Steud. l. c.*; *Duthie Grass. N.W. Ind.* 5. P. nilagiricum, *Steud. l. c.* P. procumbens, β (setigerum, *Roxb.*) *Wight Cat.* n. 3053. P. repens, *Roxb. Fl. Ind.* i. 299. P. vestitum, *Nees in Herb. Royle ex Steud. l. c.*; *Aitchis. Cat. Panjab. Pl.* 160; *Duthie Grass. N.W. Ind.* 7, *Fodd. Grass. N. Ind.* 13.—Panicum, *Wall. Cat.* n. 8733 E, 8735.

Subtropical and tropical HIMALAYA, from the Chenab to Sikkim, alt. 3–6000 ft. KHASIA HILLS, alt. 2–6000 ft. NILGHIRI HILLS. BURMA, *Wallich*. CEYLON, *Gardner*.—DISTRIB. Tonkin, China.

Annual. Habit of *P. prostratum*, with which it has been confounded, but is a hill plant, distinguished by its hairy leaves and much more hairy spike and spikelets.

†† Spikelets $\frac{1}{10}$–$\frac{1}{6}$ in.

§ *Spikelets usually close together, more or less imbricating.*

10*. **P. muticum**, *Forsk. Fl. Aeg. Arab.* 20; stout, nodes bearded, leaves long, base subcordate, panicle deltoid glabrous, spikes alternate, rachis narrow flattened, spikelets $\frac{1}{8}$ in. crowded ovoid acute glabrous, gl. I = $\frac{1}{4}$ of III ovate acute 1-nerved, II and III subequal 5-nerved, III paleate male, IV ellipsoid obtuse margins narrowly incurved. *Schult. Mant.* ii. 225; *Kunth Enum. Pl.* i. 93; *Steud. Syn. Gram.* 40. P. amphibium, *Steud. l. c.* 61; *Zoll. Pl. Rar. Jav.* 416. P. barbinode, *Trin. Gram. Panic.* 168, *Sp. Gram. Ic.* t. 318; *Thw. Enum. Pl. Zeyl.* 361; *Steud. l. c.* 67; *Duthie Grass. N.W. Ind.* 2. P. equinum, *Saltzm. ex Steud. l. c.* P. leiogonum, *Sieb. Pl. Egypt. exsicc.*; *Link. Hort. Berol.* i. 206; *Steud. l. c.* 79. P. Meyerianum, *Nees Fl. Afr. Austr.* i. 32; *Steud. l. c.* 61. P. molle, *Griseb. Fl. Brit. W. Ind.* 547 (*excl. Syn.*) *non Sw.*; *Baker Fl. Maurit.* 436; *Trim. Cat. Ceyl. Pl.* 105 (*non Sw.*). P. numidianum, *Lamk. Ill.* i. 122, *Dict.* iv. 749; *Desf. Fl. Atlant.* i. 60, t. 11; *Trin. Sp. Gram. Ic.* t. 174; *Steud. l. c.* 345; *Doell. in Mart. Fl. Bras.* ii. II. 187. P. pictiglume, *Steud. l. c.* 73. P. paraguayense, *Steud. in Pl. Rengz* (*name only*). P. punctulatum, *Arn. ex Wight Cat.* n. 2039; *Steud. l. c.* 62. P. purpurascens, *Raddi ex Opiz. in Flora*, v. (1822) 266; *Nees Agrost. Bras.* 240; *Steud. l. c.* 57. P. sarmentosum, *Hassk. Pl. Jav. Rar.* 17 (*non Roxb.*). Paspalum mollicomum, *Kunth l. c.* 47; *Steud. l. c.* 31. Digitaria mauritiana, *Wall. mss* (*Ic. in Herb. Kew*).—Panicum, *Wall. Cat.* n. 8724.

BENGAL and CEYLON, in marshes, cultivated or naturalized.—DISTRIB. Java, Africa, America.

Stem ascending, 6–8 ft. high; nodes softly bearded, rarely glabrescent. *Leaves* 6–10 by $\frac{1}{2}$–$\frac{2}{3}$ in., and sheaths glabrous or hairy; ligule short, ciliate. *Panicle* erect, 3–5 in.; rachis stiff, scabrid. *Spikes* rather distant, stout, simple or divided below, lower 2–4 in., upper gradually shorter, rachis $\frac{1}{20}$ in. broad subhispid. *Spikelets* turgid, sometimes solitary and alternate throughout the spike, green or purplish; gl. IV obscurely dotted or roughened.—The Water-grass of the Mauritius and Ceylon. I find gl. III to be always male, but being described as neuter by others it no doubt varies in this respect, as do so many other *Panica*. It is very near the American *P. molle*, Sw., and is often confounded with it, and the English names given above apply to both. It is distinguished from *P. molee* by the glabrous panicle and 1-nerved (not 3-nerved) gl. I.

11. **P. javanicum**, *Poir. Encycl. Suppl.* iv. t. 274; pubescent or hairy, leaf-base rounded or cordate, spikes 6–12, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in., biseriate alternate or upper scattered ovate acute, gl. I not = $\frac{1}{2}$ II 3-nerved, II 7-nerved acute, III like II 5-nerved paleate. IV oblong rugulose shortly abruptly awned. *Trin. Pan. Gen.* 155; *Baker Fl. Maurit.* 434. P. Helopus, *Trin. in Spreng. N. Entdeck.* ii. 84, *Pan. Gen.* 150, *Sp. Gram. Ic.* t. 183; *Nees Agrost. Bras.* 117; *Steud. Syn. Gram.* 7; *Duthie Grass. N.W. Ind.* 4, *Indig. Fodd. Grass.* t. 7, *Fodd. Grass. N. Ind.* 8 (*excl. some Syns.*); *Benth. Fl. Austral.* vii. 476 (*in note*). P. japonicum, *error for* javanicum, *Kunth Revis. Gram.* i. 205, *in syn.* P. hirsutum, *Koen. ex Roxb. Fl. Ind.* i. 300, & *Wight Cat.* n. 1620; *Aitchis. Cat. Panjab. Pl.* 159. P. Koenigii, *Spreng. Syst.* i. 311. P. papillosum, *Fenzl ex Steud. l. c.* 100. P. paspaloides, *Herb. Heyne, ex Wall. Cat.* n. 8729. P repens, *Herb. Roxb. ex Wall. l. c.* n. 8731 A (*non Fl. Ind.*). P. trichopus, *Hochst. in Flora*, xxvii. (1844) 254. Oplismenus? hirsutus, *Schult. Mant.* ii. 271. O. javanicus, *Roem. & Sch. Syst.* ii. 891. Helopus trichopus, *Hochst. ex Steud. l. c.* 100. Setaria? hirsuta, *Kunth Revis. Gram.* i. 47, *Enum. Pl.* i. 157. S. pilifera, *Spreng. Syst.* iv. *Cur. Post.* 33. Urochloa panicoides, *Beauv. Agrost.* 52, t. 11, f. 1; *Kunth l. c.* i. 205, t. 14, *Enum.* 74 (*excl. Syn. Roxb.*); *Schult.*

Mant. iii. 595. U. pubescens, *Kunth l. l. c.* 31, 74. U. mauritiana, *Bojer Hort. Maurit.* 363.—Panicum, *Sp. Wall. Cat.* n. 8729.

Plains of INDIA, from Kashmir to Bengal, and southward to CEYLON.—DISTRIB. Tropics generally.

Annual. *Stem* 1–2 ft., decumbent and rooting below, nodes pubescent. *Leaves* 1-5 by $\frac{1}{3}$–$\frac{2}{3}$ in., flat or undulate, very variable in breadth and form of base, lanceolate, acuminate and loose sheath laxly hairy; ligule a beard. *Spikes* $\frac{2}{3}$–2 in. long, secund, spreading; rachis 3-gonous, pubescent and with a few long hairs. *Spikelets* $\frac{1}{8}$ in., geminate or upper solitary, usually pubescent, pale; pedicels very short; gl. I acute or obtuse; III male, palea oblong; IV rounded at the tip.—Kunth (Revis. Gram. i. 206) says, under *Urochloa panicoides*, that he has examined in Desfontaine's Herbarium the type of Poiret's *P. javanicum*, and identified it, which he cites as a syn. of *Urochloa panicoides*, but his figure of which again quite accords with a narrow-leaved form of *P. Helopus*, Trin. This requires the adoption the name *javanicum* (by misprint *japonicum* in Kunth Revis.), for the species. Bentham, on the other hand (Fl. Austral. vii. 477), says that Munro has seen an authentic specimen of *javanicum*, and that it is quite distinct from *P. Helopus.* I have no means of verifying either authority.

12. **P. ramosum,** *Linn. Mant.* i. 29; suberect, glabrous or pubescent, leaves amplexicaul, spikes many often crowded suberect, rachis scabrid and hairy, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. 1–2-seriate elliptic ovoid or obovoid glabrous or pubescent, gl. I = $\frac{1}{2}$ III ovate 3–5-nerved margins overlapping, II 7-nerved, III 5–7-nerved neuter, palea narrow, IV subobovoid apiculate transversely rugulose. *Kunth Enum. Pl.* i. 125; *Steud. Syn. Gram.* 97; *Wall. Cat.* n. 8727 A. P. arvense, *Kunth Revis. Gram.* ii. 391, t. 109; *Enum. Pl.* i. 93; *Steud. l. c.* 67. P. aquariorum, Bansium & quinquangulare, *Ham. ex Wall. Cat.* n. 8727 C, 8725 A. B. P. canescens, *Wight Cat.* n. 1622 (*non Roth.*). P. fluitans, *Herb. Heyne ex Wall. Cat.* n. 8727 B. P. grossarium, *Koen. in Naturf.* xxiii. (1788) 205 (& *Heyne & Roxb. in Herb. Banks*). P. Kotschyanum, *Hochst. in Flora* xxv. (1842) *Beibl.* i. 33; *Steud. l. c.* 68. P. nudiglume, *Hochst. l. c.* xxvii. (1844) 33; *Steud. l. c.* P. Petiverii, *Trin. Diss.* ii. 144, *Pan. Gen.* 171, *Sp. Gram. Ic.* t. 176 A. B.; *Kunth Enum. Pl.* i. 91; *Nees Agrost. Bras.* 111; *Steud. l. c.*; *Wight Cat.* n. 1622, *Herb.* n. 1628, *in part*, & n. 3226; *Aitchis. Cat. Panjab Pl.* 160; *Duthie Grass. N.W. Ind.* 6, *Fodd. Grass. N. Ind.* 11; *Boiss. Fl. Orient.* v. 439. P. psilopodium, *Koen. ex Trin. Pan. Gen.* 217. P. semiverticillatum, *Wight Cat.* n. 1125. P. umbrosum, *Retz. Obs.* iv. 16; *Roxb. Fl. Ind.* i. 297, *Ic. pict.* 103, 797.—Panicum, *Wall. Cat.* n. 8725 A. B. 8727 A. B. C. and D. *in part.*

Plains of INDIA, from Scind and the N.W. Provinces to Behar and southward to Madras.—DISTRIB. Affghan.

Annual? *Stem* 1–3 ft., decumbent and branched below; branches erect, leafy. *Leaves* 3-4 by $\frac{1}{4}$-1 in., lanceolate, acuminate, thin, glabrous or pubescent, base rounded and usually deeply lobed, margins minutely ciliolate; sheath glabrous or pubescent, mouth usually ciliate; ligule short. *Panicle* 2–6 in., inclined, oblong, glabrous or pubescent; rachis angular. *Spikes* 1–2 in., erecto-patent, rather distant, sometimes divided at the base. *Spikelets* alternate, close or distant, often in pairs a sessile and pedicelled, pale green or yellowish, turgid; pedicel usually with long cilia.—I think this is certainly *P. umbrosum*, Retz & Roxb.

13. **P. setigerum,** *Retz. Obs.* iv. 15; leaves ovate-lanceolate with long cilia towards the amplexicaul base margins below crenulately wrinkled, spikes alternate, pedicels with scattered long hairs, spikelets $\frac{1}{8}$ in. biseriate alternate imbricate subsessile ovate acuminate glabrous or pubescent, gl. I

$=\frac{2}{3}$ III obtuse 3-nerved, II ovate-lanceolate acuminate 7-nerved, III 5-nerved neuter, palea as broad acuminate, IV broadly oblong mucronate or shortly awned finely rugulose. *Roxb. Fl. Ind.* i. 299; *Kunth Enum. Pl.* 90 (*excl. some Syns.*); *Herb. Ham. ex Wall. Cat.* n. 8730 B. P. affine, *Poir. Encycl. Suppl.* iv. 273 (*ex Kunth*). P. grossarium, *Roxb. Ic. Ined.* t. 798 (*not Fl. Ind.*). P. Helopus, *Trin.* (hirsutum, *Koen.*), *Wight Cat.* n. 1620. P. lanceolatum, *Herb. Heyne ex Wall. Cat.* n. 8730 A. P. nutans, *Herb. Rottl.* P. prostratum, forma major, *Thw. Enum. Pl. Zeyl.* 359. P. prostratum, *var.* horizontale, *Trim. Cat. Ceyl. Pl.* 105. P. repens, *Herb. Wight ex Wall. Cat.* n. 8730 C. P. subcordatum, *Herb. Wight ex Wall. Cat.* 8730 D. ? Oplismenus prostratus, *Edgew. in Journ. Linn. Soc.* vi. (1862) 195.—Panicum, *Wall. Cat.* n. 8727 D, *in part*, 8730.

BENGAL; common. The CONCAN and SOUTH DECCAN, *Rottler*, &c. CEYLON, *Thwaites* (C.P. 3236).

Stem 2–3 ft., slender, prostrate and widely straggling below; lower internodes long; nodes rooting, tomentose. *Leaves* 3–5 by $\frac{1}{2}$–$1\frac{1}{4}$ in., finely acuminate, flat, margins crispedly wrinkled below, or to beyond the middle; sheath with ciliate margins; ligule a few hairs. *Spikes* 3–6, suberect or spreading, rather distant; angles of rachis scaberulous. *Spikelets* solitary or geminate, suberect, very acuminate.—It is impossible to recognize this species from Retz's description, but the name attached to three different specimens in Rottler's Herbarium leaves little doubt as to his plant. Roxburgh describes *setigerum* as having the stem almost woody towards the base, which is hardly the case in the specimens I have seen. Edgeworth cites *P. setigerum*, Roxb., for his *Oplismenus prostratus*, but it may well be doubted if he knew Roxburgh's plant.

Var. *tomentosum*, leaves 6–7 in., margins and sheaths with very long hairs, spikelets larger $\frac{1}{6}$ in. long tomentose, awn longer.

14. **P. distachyum,** *Linn. Mant.* i. 138; slender, quite glabrous, or panicle sparsely hairy, leaves linear or lanceolate base rounded, spikes 2–4 distant spreading, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. solitary subsessile 1–2-seriate ellipsoid glabrous, gl. I $=\frac{1}{2}$ II 5–7-nerved, II ovate acute 7-nerved, III 5-nerved, IV ellipsoid obscurely rugulose top rounded. *Retz. Obs.* iii. 17; *Lamk. Ill.* t. 43, f. 2; *Kunth Enum. Pl.* 91; *Steud. Syn. Gram.* 41; *Wight Cat.* n. 1612; *Thw. Enum. Pl. Zeyl.* 359; *Trim. Cat. Ceyl. Pl.* 104; *Aitchis. Cat. Panjab. Pl.* 159; *Duthie Grass. N.W. Ind.* 3, *Indig. Fodd. Grass.* t. 42, *Fodd. Grass. N. Ind.* 6; *Benth. Fl. Austral.* vii. 478. P. distachyon & marginatum, *Herb. Madr. ex Wall. Cat.* n. 8732 A. B. P. dimidiatum, *Heyne ex Wall. Cat.* n. 8732 D. P. subquadriparum, *Trin. Gram. Panic.* 145, *Sp. Gram. Ic.* t. 186; *Kunth l. c.* 80; *Steud. l. c.* 60. P. repens, *Herb. Roxb. ex Wall. l. c.* 8731 A. Digitaria distachya, *Pers. Syn.* i. 85.—Panicum, *Wall. Cat.* n. 8731, 8732.

Plains of INDIA, from the Panjab to Upper Assam and Burma, and southward to Malacca and CEYLON. GREAT COCOS Isld. (Ind. Ocean), *Prain.*—DISTRIB. China, Malaya, Australia.

Stems 1–2 ft., branched, straggling and creeping below. *Leaves* 2–6 by $\frac{1}{8}$–$\frac{1}{4}$ in., flat, margins of sheath ciliate or not, mouth hairy. *Spikes* 1–$2\frac{1}{2}$ in., rarely more than 4, erect, at length spreading; rachis slender, glabrous. *Spikelets* variable in size, pale green; gl. I with overlapping margins below; II paleate or not, palea if present narrow, neuter.

Var. *brevifolium*, Wight & Arn. in Wight Cat. n. 1612 a; leaves $\frac{1}{3}$–1 in., ovate-lanceolate, spikes shorter, rachis broader, spikelets 2-seriate.—Drier places.

§§ *Spikelets more or less remote.*

15. **P. semiverticillatum,** *Rottler in Ainslie, Mat. Med. Hindost. Ed.* I. 219 (*name only*); stem stout erect branched, leaves broad base woolly, panicle large pubescent, spikes distant long alternate or whorled lax-fld., rachis slender, spikelets ⅛–⅙ in. ovoid obtuse glabrous, gl. I much shorter than III very broad obtuse 5-nerved, II obtuse 7-nerved, III 5-nerved, palea narrow hyaline, IV ovate-oblong obtuse minutely granulate. *Steud. Syn. Gram.* 62. P. semiverticillatum, *Wight Cat.* n. 3050?, 3051. P. Petiverii, *Thw. Enum. Pl. Zeyl.* 359.

SOUTH DECCAN, Coimbatore, *Rottler*, *Wight*; Anamallay Hills, *Beddome*. CEYLON, at Damboul, *Gardner* (C.P. 895).

Stem tall, erect, or base shortly decumbent; nodes and often internodes below them tomentose. *Leaves* 5–8 by ⅓–½ in., linear-lanceolate, finely acuminate, flat, glabrous except at the narrow base; sheath tomentose above; ligule a tuft of wool. *Panicle* 4–8 in., subpyramidal; *Spikes* 1–2½ in.; rachis triquetrous, glabrous or pubescent. *Spikelets* pale, often solitary, upper shortly pedicelled.—Possibly a cult. form of *P. ramosum.* Described by Ainslie as a grain cultivated by the poor at Coimbatore and in other grain countries. I assume it to be Rottler's plant, relying on Wight, who had resided at Coimbatore. P. semiverticillatum, *Herb. Rottler*, from Jaffna in Ceylon is *P. colonum.*

16. **P. remotum,** *Retz. Obs.* iv. 17; very slender, leaves long narrow and sheaths quite glabrous, spikes few distant slender spreading, spikelets ⅒ in. distant subsolitary ellipsoid obtuse glabrous, gl. I = ⅓–½ III obtuse or subacute 3-nerved, II obtuse 5–7-nerved, III 5-nerved, palea narrow, IV elliptic obtuse minutely rugulose. *Kunth Enum. Pl.* i. 125; *Steud. Syn. Gram.* 68. P. grossarium, *Koen.* var. *Herb. Rottler.* P. Petiverii, *Trin. Sp. Gram. Ic.* t. 176, f. C. P. relaxatum, *Nees ex Steud. Nom. Ed.* II. ii. 262; *Wight Cat.* n. 1623 *a*, and *β* depauperatum.

ORISSA, *Herb. Calcutt.* SOUTH DECCAN, *Rottler*; Courtallam, *Wight*; Anamallay Hills, *Beddome.*

Stem 1–2 ft., much branched, decumbent, flaccid. *Leaves* 2–4 by ¼–⅓ in., finely acuminate, membranous, base quite glabrous; ligule very short, lacerate. *Spikes* 6–8, 2–4 in. long; rachis very slender, almost capillary, triquetrous, quite glabrous. *Spikelets* solitary or in distant pairs, sessile, or the upper long-pedicelled; glumes thin, pale with green nerves.—I find no difference between Nees' two vars. of *relaxatum.*

17. **P. Kurzii,** *Hook f.*; slender, leaves short lanceolate base cordate, margins of sheaths ciliate, spikes few very slender naked or with few hairs, spikelets ⅒ in. ovoid acute glabrous, gl. I = ⅓–½ III 3–5-nerved, II ovate acuminate 7-nerved, III 5-nerved, palea broad, IV elliptic-oblong minutely rugulose, tip rounded apiculate.—Panicum, *Wall. Cat.* n. 8745.

LOWER BENGAL, *Wallich*, *Griffith*; Seebpore, *Kurz*; Vicrampore and Dacca, *Clarke.* BEHAR; top of Parusnath, *J. D. H.*

Annual, decumbent and rooting below, flaccid. *Leaves* 2-3 by ⅓–⅔ in., acuminate, margins crisped towards the usually ciliate base; sheath with villous margins; ligule bearded. *Panicle* 2-6 in. long; spikes few, very distant, 2–3 in. long, with rarely a short branch bearing 2–3 spikelets towards the base of the lower. *Spikelets* pale, subsessile or pedicelled.—This Lower Bengal plant found at Seebpore close to the Calcutta Bot. Garden, should be one of Roxburgh's species, but I cannot identify it. It is very closely allied to *P. remotum* and altogether like that plant in habit, differing chiefly in the short leaves and the ciliate margins of the leaf-sheaths and in habitat. A doubtful specimen from Baidyanath (Santal Pergunnahs) collected by Clarke, has the narrow leaves of *remotum.*

18. **P. latifolium,** *Linn. Sp. Pl.* 58; stem prostrate and rooting below, leaves lanceolate acuminate base rounded or cordate, panicle lax, branches distant stout, rachis scaberulous, spikelets large $\frac{1}{7}$–$\frac{1}{5}$ in. very distant secund solitary or in pairs, glumes coriaceous 5-nerved, tips thickened, I = $\frac{1}{2}$ II or longer, II and III subequal, III broadest triandrous, palea narrow, IV ovoid acuminate quite smooth. *Willd. Sp. Pl.* i. 350; *Kunth Enum. Pl.* i. 117; *H. B. & K. Nov. Gen. & Sp.* i. 100. P. Balbisianum, *Schult. Mant.* ii, 254; *Steud. Syn. Gram.* 76. P. grandiflorum, *Trin. ex Nees Agrost. Bras.* 154. P. oryzoides, *Sw. Prodr.* 23, *Fl. Ind. Occ.* i. 161; *Kunth l. c.* 129; *Nees Agrost. Bras.* 154; *Steud. l. c.* 80; *Arduin. Animadv.* ii. t. 5; *Griseb. Fl. Brit. W. Ind.* 547. P. Pseudo-oryzoides, *Steud. l. c.* 75. P. Ridleyi, *Hack. in Trans. Linn. Soc. Ser.* II. *Bot.* iii. 401 (*name*). P. zizanioides, *H. B. K. l. c.*; *Steud. l. c.* 75.—Panicum, *Griff. Notul.* iii. 31, n. 17.—*Wall. Cat.* n. 8706.—Gram. Virgin. &c. *Moris. Hist. Pl.* iii. 196, t. 8, f. 4.—*Sloane Hist. Jam.* i, 114, t. 71, f. 3.

Bengal, Silhet, Cachar, Burma, and the Malay Penins.—Distrib. Eastern trop. Asia and America.

Stem 6–24 in., rather stout, extensively creeping, glabrous, or nodes tomentose. *Leaves* 1–6 by $\frac{1}{4}$–$\frac{3}{4}$ in., subdistichous, flat, glabrous; sheaths smooth; ligule short, ciliate. *Panicle* 1–6 in., erect, contracted; branches simple or sparingly divided, having short 3-fld. branchlets at the base; rachis stiff, angular. *Spikelets* turgid, very obscurely jointed on the short stiff pedicels, pale green; gls. all broadly ovate, their thickened tips laterally compressed, lateral nerves on each side close together; III empty or imperfectly triandrous.—The compressed thickened tips of the glumes are very characteristic.

Var. *majus*; stem stout 4–6 ft., internodes 4–6 in, rigid, nodes tomentose, leaves $\frac{3}{4}$ in. broad, margins thickened, base narrowed, panicle nearly 12 in. long.—Malay Peninsula, at Goping, *King's Collector*.

Sect. IV. Hymenachne. (See p. 27.)

19. **P. myurus,** *H. B. & K. Nov. Gen. & Sp.* i. 98 (*excl. Syn. Lamk.*); stem tall stout spongy below, leaves long flat base cordate, panicle narrow very compound often interrupted, branches closely appressed, spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. erect narrowly lanceolate, gl. I = $\frac{1}{3}$ III, II 3-nerved, III much longer than II 3–5-nerved, IV small thin lanceolate. *Kunth Revis. Gram.* i. 33, *Enum. Pl.* i. 86, *Suppl.* 65; *Thw. Enum. Pl. Zeyl.* 361; *Trim. Cat. Ceyl. Pl.* 104; *Duthie Fodd. Grass. N. Ind.* 10 (*excl. Syn.*); *Benth. Fl. Austral.* vii. 480 (*excl. Syn. interruptum*)—*Excl. in all Syn. Lamk. Rudge, Richard, Trin.* P. acutiglumum, *Steud. Syn. Gram.* 66. P. auritum, *Hassk. Pl. Rar. Jav.* 22 (*non Presl.*). P. cynosuroides, *Herb. Rottl.* P. Hasskarlii, *Steud. in Zoll. Syst. Verz.* 54, *Syn. Gram.* 70; *Miq. Fl. Ind. Bat.* iii. 456. P. myurum, *Meyer Fl. Esseq.* 50 (*excl. Syn. Lamk & Rudge*). P. mangaloricum, *Steud. l. c.* 78. P. serratulum, *Herb. Ham. in Wall. Cat.* n. 8699. P. serrulatum, *Roxb. Fl. Ind.* i. 307; *Kunth Enum. Pl.* i. 126. Hymenachne myuros, *Beauv. Agrost.* 49, t. 10, f. 8 (*excl. Syn. Lam.*); *Nees Agrost. Bras.* 275; *Griseb. Fl. Brit. W. Ind.* 553 (*excl. Syn.*); *Steud. l.c.* Agrostis alopecuroides, *Vahl. mss.*, & A. monostachys, *Poir. Encycl. Suppl.* i. 256, *ex Kunth l. c.*—Panicum, *Wall. Cat.* n. 8699.

Marshes in Upper and Lower Bengal, Assam, Silhet, the Deccan, Malayan Peninsula and Ceylon.—Distrib. Trop. As. Austral. and Amer.

Stem erect, 2–6 ft., leafy, rooting at the nodes of the prostrate base, which is often as thick as a swan's quill. *Leaves* 12–18 by $\frac{3}{4}$–1 in., tapering from a broad cordate base to a fine point, margin serrulate; sheath smooth, glabrous; ligule very short, rounded. *Panicle* 6–12 in., rarely 1 in. diam., often interrupted, sometimes quite cylindric. *Spikelets* erect, very shortly pedicelled, pale green; gl. I broadly ovate, acuminate; III tapering into a long rigid erect beak, palea 0 or imperfect.—Generally cited as *P. myurus*, of Lamk, but as Nees has pointed out (Agrost. Bras. l.c.) Lamk's plant is Richards' *P. myosurus* (= *P. indicum*). In Munro's herbarium *P. myurus* is, perhaps rightly, referred to *P. amplexicaule*, Rudge (Pl. Gui. i. 21), which is a much broader leaved plant.

20. **P. assamicum,** *Hook. f.*; slender, erect, leaves narrow base rounded, panicle spiciform cylindric very narrow interrupted, spikelets $\frac{1}{8}$ in. densely crowded on the appressed branches, gl. I = $\frac{1}{4}$ III 3-nerved, II and III lanceolate 5-nerved, III rather longer than II epaleate, IV ovate-lanceolate thin smooth.

ASSAM, *Masters*, *Griffith*; DACCA, *Clarke*.

Stem 12–18 in. or more, ascending, as thick as a sparrow's quill, lower nodes rooting. *Leaves* 2–4 in., narrowed from the base to the acute tip, margins quite smooth, involute (when dry); sheath glabrous or mouth slightly hairy; ligule a narrow membrane. *Panicle* 3 in., hardly $\frac{1}{4}$ in. diam., pale green, quite glabrous. *Spikelets* very shortly pedicelled; glumes thin.—I advance this species with hesitation. It is nearest to *P. myurus*, differing in size, narrow leaves, very narrow panicle, smaller spikelets, and shorter glume III.

21. **P. auritum,** *Presl ex Nees Agrost. Bras.* 176; tall, erect, leaves linear-lanceolate base broadly cordate, panicle long contracted or more or less effuse much fastigiately branched, branches erect, spikelets $\frac{1}{16}$–$\frac{1}{10}$ in. crowded on short branchlets solitary sessile or shortly pedicelled oblong or ovate-oblong subacute, gl. I = $\frac{1}{3}$ III obtuse or acute nerves 3–5 arching, II and III subequal acute or acuminate 5-nerved, III paleate neuter, IV lanceolate acuminate smooth. *Presl Rel. Hænk.* i. 305; *Trin. Pan. Gen.* 176; *Kunth Enum. Pl.* i. 113; *Steud. Syn. Gram.* 70; *Thw. Enum. Pl. Zeyl.* 361; *Trim. Cat. Ceyl. Pl.* 105; *Baker Fl. Maurit.* 437; *Miq. Fl. Ind. Bat.* iii. 456. P. insulicola, *Steud. l. c.* 78. P. javanum, *Nees & Bühse in Miq. Pl. Jungh.* 376; *Miq. Fl. Ind. Bat. l. c.* 453. P. maximum, *Wall. Cat.* n. 8715 F. P. patens, *Bojer Hort. Maurit. ex Baker l. c.* P. secundum, *Herb. Rottl.* Hymenachne myurus, *Herb. H.f. & T.* (*in part*).—Panicum, *Wall. Cat.* n. 8701, 8707.

Marshes from BENGAL and the CONCAN to BURMA, TRAVANCORE, the MALAY PENINSULA, and CEYLON.—DISTRIB. Malaya, China, Mauritius?

Perennial. *Stem* 3–6 ft., sometimes as stout as a goose-quill, soft. *Leaves* 8–14 by $\frac{3}{4}$–$1\frac{1}{4}$ in., glabrous or sparsely hairy beneath, as is the sheath; mouth villously bearded; ligule very narrow. *Panicle* 8–18 in., green, rachis scaberulous, branches 2–5 in., branchlets and fascicles of spikelets subsecund. *Spikelets* green, glabrous, nerves strong; gl. I broadly ovate; II and III ovate-oblong; palea of III small; IV as long as III, white, thinly coriaceous.—The Ceylon specimens have longer ($\frac{1}{10}$–$\frac{1}{8}$ in.) narrower and more acuminate spikelets than the normal.

22. **P. interruptum,** *Willd. Sp. Pl.* i. 341; stem tall very stout spongy below, leaves long flat base rounded or subcordate, panicle very narrow almost reduced to a spike, spikelets (many imperfect) $\frac{1}{6}$–$\frac{1}{5}$ in. fascicled very shortly pedicelled ovoid rather turgid, gl. I = $\frac{1}{3}$ III orbicular hyaline 5-nerved, II = III ovate-oblong obtuse strongly 9-nerved, III ovate-oblong obtuse, palea small, IV much smaller lanceolate acuminate polished white. *Nees Fl. Afr. Austr.* 51; *Kunth Enum. Pl.* i. 87; *Roxb. Fl. Ind.* i. 286; *Wall. Cat.* n. 8695 *Excl.* C.; *Thw. Enum. Pl. Zeyl.* 361; *Trim. Cat. Ceyl. Pl.* 104; *Wight Cat.* n. 1640; *Griff. Notul.* iii. 26, *Ic. Pl. Asiat.*

t. 139, f. 221 & t. 146, f. 2.; *Dalz. & Gibs. Bomb. Fl.* 316. P. caudatum, *Thunb. Fl. Cap.* i. 393. P. inundatum, *Kunth Revis. Gram.* i. 34; *Enum. Pl.* i. 88. P. spiciforme, *Hochst ex A. Rich. Tent. Fl. Abyss.* ii. 359. P. stagninum, *Herb. Ham. ex Wall. Cat. n.* 8695 D (*non Retz*). P. turritum, *Thunb. in Mus. Nat. Acad. Upsal.* x. 148. P. uliginosum, *Roth Nov. Pl. Sp.* 50. Hymenachne interrupta, *Bühse in Miq. Pl. Jungh.* i. 377; *Miq. Fl. Ind. Bat.* iii. 458; *Steud. l. c.* 101.

Swamps; from the UPPER GANGETIC PLAIN to ASSAM and BURMA, and southward to CEYLON—DISTRIB. China, Malaya, Afr. trop.

Stem 3–5 ft., lower internodes often as thick as the thumb, rooting. *Leaves* 6–12 by $\frac{1}{4}$–$\frac{1}{2}$ in., many-nerved, base hardly contracted; sheath smooth; ligule short, membranous. *Spike* 6–10 in. by $\frac{1}{3}$ in. diam., strict; rachis stout, terete, channelled. *Spikelets* spreading, much longer than their pedicels, green, herbaceous.—Very near the American *P. vilfoides*, Trin. (*fluviatile*, Nees). Bentham reduces *P. interruptum* to *P. myurus*, but they are very different plants.

23. **P. indicum,** *Linn. Mant.* ii. 184; stem slender, leaves linear glabrous or hirsute base narrow, panicle spiciform oblong or cylindric dense fld. branches very short, spikelets longer than their pedicel $\frac{1}{10}$–$\frac{1}{8}$ in. crowded ovoid or oblong subacute straight or curved glabrous or hispid, gl. I = about $\frac{1}{3}$ III 3-nerved, II ovoid cymbiform obtuse or subacute 7–9-nerved, III as long as II oblong obtuse 7–9-nerved, palea minute, IV minute ovoid subacute. *Retz. Obs.* iii. 9; *Kunth Enum. Pl.* i. 133; *Steud. Syn. Gram.* 84; *Trin. Diss.* ii. 170, *Pan. Gen.* 84, *Sp. Gram. Ic.* 197; *Roxb. Fl. Ind.* i. 285; *Thw. Enum. Pl. Zeyl.* 361 (*excl.* CP. 909); *Trim. Cat. Ceyl. Pl.* 104; *Benth. Fl. Hongk.* 413, *Fl. Austral.* vii. 480; *Franch. & Sav. En. Pl. Jap.* ii. 163. P. angustum, *Trin. Sp. Gram. Ic.* t. 334; *Wight Cat.* n. 1642; *Steud. l. c.* P. arcuatum, *Br. Prodr.* 189; *Kunth l. c.* 77; *Griff. Notul.* iii. 39, 40, *Ic. Pl. Asiat.* t. 147, f. 1; *Duthie Grass. N.W. Ind.* 5, *Fodd. Grass N. Ind.* 9. P. contractum, *Wight & Arn. ex Nees in Herb. Wight*; *Steud. l. c.* 84. P. conglomeratum, *Herb. Rottl.*; ? *Linn. Mant.* 324; *Kunth l. c.* 133. P. interruptum, *Wall. Cat.* n. 8695 *C. partim.* P. Johannæ & incurvum, *Herb. Linn. ex Munro in Journ. Linn. Soc.* vi. 39. P. microstachyum, *Lamk. Ill.* i. 170, *Encycl.* iv. 739; *Kunth l. c.* 88. P. myosurus, *Rich. in Act. Soc. Hist. Nat. Par.* i. (1792) 106. P. myurus, *Lamk. Ill.* i. 172. P. phalaroides, *Roem. & Sch. Syst.* ii. 452. P. phleoides, *Br. ex Kunth l. c.* Hymenachne indica, *Bühse ex Miq. Fl. Ind. Bat.* iii. 458. H. ? phalaroides, *Nees Agrost.* 276; *Steud. l. c.* 202. ? Aira indica, *Linn. Sp. Pl. Ed.* 2. 94. Panicum, *Wall. Cat.* n. 8696 B. C. (*in part*) D. E. F. (*in part*) G. H., 8697, & 8698.

Tropical and subtropical INDIA (ascending 6000 ft. in the Himalaya) from Garwhal eastwards and southwards. CEYLON.—DISTRIB. Trop. Asia and Australia. (Mexico, an alien).

P. indicum appears to pass insensibly into *P. interruptum* and *P. myosuroides*, the former of which differs in its stouter habit, the latter in its caudiform spike and more minute rounded spikelets. Though so abundant in the Plains to the eastward of the Jumna, I have seen no specimens from the west of that river; nor from Africa. The following are the principal Indian forms, in describing which I have used the word spike in a conventional sense.

Var. *indicum proper*; stem 6–18 in. erect or decumbent at the base, leaves narrow, spikes $\frac{1}{2}$–2 in. cylindric green whitish or blue-purple, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. ovate-lanceolate acute straight or decurved glabrous or sparsely setose.—The common Plains form. *P. phalaroides*, Roem. & Sch. is a common state with more setose spikelets; it is *P. indicum*, *β*, Wight Cat. 1641 B.

Var. *elatum*; glabrous, stem 3–4 ft. stout erect, leaves 6–10 in. by $\frac{1}{3}$ in., spike 3–6 in. rather stout, spikelets $\frac{1}{6}$ in. erect oblong-ovate acute violet blue rarely greenish.—Khasia hills, in wet places alt. 5–6000 ft. The nearest form to *P. interruptum.*

Var. *pilosum*; like var. *elatum*, but not so tall, more flaccid, leaves hirsute with spreading hairs.—Khasia hills, alt. 4–5000 ft.

Var. *villosum*; softly silkily villous, stem 1–2 ft., leaves quite erect, spike 2–6 in., spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. green or purplish ovate-oblong glabrous.—Panicum, No. 39, *Herb. Ind. Or. Hook. f. & T.*—Khasia hills, alt. 5–6000 ft.

Var. *gracile*; stem 1–2 ft. very slender simple or branched, leaves 4–6 by $\frac{1}{6}$–$\frac{1}{3}$ in. flaccid, spikes 2–4 in. pale, spikelets $\frac{1}{6}$ in. ovoid subacute glabrous spreading. —Nepal, Kumaon, Sikkim, &c.

Var. *angustum*; whole plant very slender spike of very minute loosely packed spikelets $\frac{1}{10}$ in. long.—This, the *P. angustum* Trin., is a starved form.

Var. *turgidum*; stem 6–12 in., spike short cylindric or oblong very pale often proliferous, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. oblong turgid setulose.—Panicum, *Wall. Cat.* n. 8697, 8698.—In wet places. Perhaps a diseased form.

24. **P. myosuroides,** *Br. Prodr.* 189; slender, leaves narrow, spikelets innumerable $\frac{1}{18}$–$\frac{1}{12}$ in. densely crowded in an elongate cylindric curved caudiform panicle broadly obovoid or subglobose obtuse, gl. I about $\frac{1}{3}$ III 3-nerved, II very convex and III 5–7-nerved, III oblong obtuse palea minute, IV minute ovate-oblong. *Kunth Enum. Pl.* i. 77; *Steud. Syn. Gram.* 56; *Benth. Fl. Austral.* vii. 480 (*excl. syn. angustum*); *Duthie Fodd. Grass. N. Ind.* 11. P. arcuatum, *Wight Cat.* n. 1639 (*non Br.*). P. angustum, *Wight l. c.* 1642 (*non Trin.*); *Wight Cat.* n. 164. P. curvatum, *Roxb. Fl. Ind.* i. 286 (*non Linn.*); *Kunth l. c.* 87 (*excl. syn.*). P. indicum, *Herb. Wight* n. 3042; *Thw. Enum. Pl. Zeyl.* 361 (*in part*). P. interruptum, *var.* contigua. *Steud. in Pl. Ind. Or. Hohen.* n. 1606 (*non Willd.*). P. multiflorum, *Roxb. Ic. Pict. ined.* t. 782. P. nervosum, *Herb. Heyne ex Wall. Cat.* n. 8696 A.—Panicum, *Wall. Cat.* n. 8696 A, C. F. (*in part*) G.—Sporobolus, *Wall. Cat.* n. 3766 *ex Wight. Cat.* n. 1642.

Throughout the hotter parts of India from NEPAL eastward to ASSAM and BURMA, and southward to the MALAY PENINSULA and CEYLON.—DISTRIB. China, Austral. Afric. trop.

Stem erect or shortly creeping. *Leaves* rarely $\frac{1}{4}$ in. broad. *Spiciform* or rather caudiform panicle sometimes 8 inches long, tapering from base to tip, with rarely a short branch abruptly breaking out from near the base. *Spikelets* longer than their pedicels, green or purplish.—This is unquestionably *P. myosuroides*, Br., and Roxburgh's *P. curvatum*, but I hesitate to cite all the authors who have taken up these names, in some cases probably from forms of *P. indicum.* In its ordinary state it is a very distinct grass, from its elegant tail-like inflorescence and minute obtuse spikelets, but I find it impossible to separate specimens with short spikes from states of *P. indicum.* *P. angustum*, Trin., is such a state, and is referred to *myosuroides* by Bentham, but its larger spikelets are rather those of true *indicum.*

25. **P. curvatum,** *Linn. Syst. Nat.* xii. 730; stem very slender, and narrow leaves flaccid, spikelets in a lax panicle with capillary flexuous branches, spikelets gibbously ovoid-oblong decurved, nerves very strong, gl. I minute, II cymbiform or almost galeate, III shorter than II ovate, palea linear-oblong, IV minute. *Wight Cat.* n. 1636; *Thw. Enum. Pl. Zeyl.* 360; *Trim. Cat. Ceyl. Pl.* 105; *Nees Agrost. Bras.* 207, *Fl. Afr. Austr.* 50. P. costulatum, *Bojer, mss.* P. coryophorum, *Kunth Revis. Gram.* 93, t. 107; *Enum. Pl.* 88; *Suppl.* 66.—Panicum, *Wall. Cat.* n. 8742.

SOUTH DECCAN PENINSULA; *Heyne*, &c., Courtallam, *Wight*. CEYLON, *Walker*, *Thwaites*.—DISTRIB. Madagascar, S. Africa.

Stem 6–18 in., prostrate, much branched, remotely leafy, nodes glabrous. *Leaves* 2–3 by $\frac{1}{8}$ in., flat, sometimes sparsely hairy; sheath long, slender; ligule hardly any. *Panicle* 1–4 in., branches alternate, quite glabrous. *Spikelets* $\frac{1}{12}$–$\frac{1}{10}$ in., very strongly nerved, except gl. I, which is transversely oblong; II very strongly 11-nerved; III 3–5-nerved; IV ovoid, obtuse.—A very elegant small grass. Steudel (Syn. Gram. 85) has referred Sprengel's *P. madagascarense* (Syst. i. 317) to this, but Sprengel's character "glumes obsoletely nerved" is irreconcilable.

Sect. V. BREVIGLUMÆ. (See p 27.)

26. **P. canaliculatum,** *Nees in Wight Cat.* n. 1624; stems very slender flaccid branched, leaves narrow, spikelets $\frac{1}{10}$–$\frac{1}{3}$ in. solitary or few together clustered on distant very short branchlets along a capillary simple rachis ovate-oblong very shortly pedicelled, gls. membranous, I and II not = $\frac{1}{2}$ III broadly ovate subequal, III ovate acute paleate male, IV as long as III lanceolate acuminate thin muriculate tip minutely 2-toothed and mucronulate. *Steud. Syn. Gram.* 55. P. myurum, *Wight ex Steud. l. c.* P. stenostachyum, *Thw. Enum. Pl. Zeyl.* 436; *Trim. Cat. Pl. Ceyl.* 105. Aira interrupta, *Rottl. ex Steud. Syn. Gram.* 55.

Southern DECCAN PENINSULA, *Wight*. CEYLON; Jaffna, *Herb. Rottler*; Trincomalee, *Glenie*.

Quite glabrous. *Stems* 2–3 ft., many from a small woody branched nodulose rootstock, erect or decumbent at the base. *Leaves* 3–10 by $\frac{1}{8}$–$\frac{1}{6}$ in., thin, flat, quite smooth, nerves very slender, tips setaceous, base narrow; sheaths smooth; ligule obscure, ciliate. *Spike* 3–8 in., almost capillary. *Spikelets* solitary, binate, or in clusters of 3–6, on a very short branch, sessile or subsessile, pale, glistening; gl. I and II very broadly ovate, acute or obtuse; I 3-nerved; II rather the longest, 5-nerved; III faintly 5–7-nerved, its palea large, obtuse with broadly inflexed margins and green nerves at the smooth angles, which are faintly produced at the tips; IV very pale, dorsally flattened and channelled, 5-nerved; palea acute. *Lodicules* quadrately cuneate. *Anthers* linear. *Style* long, stigma short.—A very peculiar species.

27. **P. nodosum,** *Kunth Enum. Pl.* i. 97; stem creeping and rooting below, leaves linear base rounded or cordate, panicle broad rachis very slender scaberulous, branches very long filiform striate bearing remote racemose or solitary spikes of few secund elliptic-oblong acute spikelets $\frac{1}{12}$–$\frac{1}{4}$ in. long, gl. I not = $\frac{1}{2}$ III 3–5-nerved, II rather longer than I 5-nerved, III 5–7-nerved epaleate, IV elliptic-lanceolate acute thin smooth. *Steud. Syn. Gram.* 59; *Benth. Fl. Hongk.* 412; *Thw. Enum. Pl. Zeyl.* 360; *Trim. Cat. Ceyl. Pl.* 105. P. Arnottianum, *Nees in Wight Cat.* n. 1611, *Herb.* n. 3068; *Steud. l. c.* P. multinode, *Presl Rel. Hænk.* i. 303 (*non Lamk.*). P. violaceum, *Llanos Fragm.* 42.

BENGAL, ASSAM, and southwards to MALACCA, TRAVANCORE and CEYLON.—DISTRIB. Malaya, China.

Stems 1–2 ft., slender, leafy. *Leaves* 2–5 by $\frac{1}{3}$–$\frac{1}{2}$ in., flat, thin, and as well as their sheaths glabrous pilose or hirsute, base ciliate; ligule very short. *Panicle* 4–6 in., branches 2–3 in., solitary or fascicled. *Spikelets* pale green, sessile or very shortly pedicelled, glabrous or slightly hairy; gl. IV. as long as III, dorsally flattened.

Sect. VI. EFFUSÆ. (See p. 27.)

* Gl. I as long as III or nearly so. (The three following species are in no way allied.)

28. **P. æquiglume,** *Hook. f.*; slender, leaves linear-lanceolate base narrow, panicle ovate lax, branches lax in alternate fascicles or whorls spreading laxly few-fld. and branchlets and pedicels capillary smooth, spikelets $\frac{1}{12}$ in. solitary oblong obtuse faintly nerved, I = III oblong obtuse white nearly flat faintly 5-nerved deciduous, II broadly ovate subacute 9-nerved convex, III shorter than II oblong paleate male or neuter nerveless, IV much shorter than II stipitate broadly ovate obtuse sparsely pilose above or glabrous white.

NILGHIRI HILLS; Goodadoor Ghats, alt. 5000 ft., in a wood, *Lawson.*

Stem 1–2 ft., apparently geniculately ascending, smooth, purplish; nodes glabrous. *Leaves* 2–3 by $\frac{1}{3}$–$\frac{1}{2}$ in., flat, green, smooth, 5–7-nerved and striate, midrib slender; base rounded or narrowly cordate; sheath purple, margin fimbriately ciliate; ligule a row of hairs. *Panicle* 4 in., branches in 6–8 rather distant fascicles of two or three, lowest $2\frac{1}{2}$ in. long. *Spikelets* very pale; gl. I very deciduous (so that the mature spikelet appears 3-glumed), but leaving a distinct scar; II more coriaceous, nerves more distinct; III and its palea sometimes very small and empty.—A very curious grass.

29. **P. ovalifolium,** *Poir. Encycl. Suppl.* iv. 279; stem slender decumbent and rooting below, leaves 1–2 in. ovate acuminate amplexicaul, panicle ovoid excessively branched, rachis branches and pedicels capillary, spikelets solitary $\frac{1}{16}$–$\frac{1}{10}$ in. ovate subacute, gl. I. nearly = III, II hemispheric pubescent or hirsute 5-nerved, III flat obtuse, palea large, IV oblong acute dorsally rounded smooth, margins narrowly inflexed. *Beauv. Fl. Owar.* ii. 79, t. 110, f. 1; *Kunth Enum. Pl.* i. 113; *Steud. Syn. Gram.* 84; *Benth. Fl. Hongk.* 413; *Thw. Enum. Pl. Zeyl.* 359; *Trim. Cat. Ceyl. Pl.* 105; *Duthie Grass. N.W. Ind.* 6. P. amplexicaule, *Poir.* (*teste Beauv.*) *ex Kunth l.c.* P. arborescens, *Linn. Sp. Pl.* 59 (*in part*) (*cf. Trim. in Journ. Linn. Soc* xxiv. 135). P. brevifolium, *Roxb. Fl. Ind.* i. 306, & *Herb. Linn.* P. guineense, *Desv. mss. ex Poir, Encycl. Suppl.* iv. 279. P. tricarinatum, *Steud. Nom. Ed.* II ii. 264, *Syn. Gram.* 94. Isachne tricarinata, *Roth Nov. Sp.* 57; *Kunth Enum. Pl.* i. 136.—Panicum, *Wall. Cat.* 8737.

SIKKIM HIMALAYA, alt. 4000 ft.; KHASIA HILLS, alt. 2000 ft.; MUNNEPORE, BURMA, the MALAY PENINSULA and CEYLON.—DISTRIB. Malaya, China, trop. Afr.

Stem geniculate and ascending below, leafy usually up to the panicle. *Leaves* membranous and sheaths glabrous ciliate or hairy above or all over; ligule very short, ciliate. *Panicle* ovoid. *Spikelets* variable in size; gl II very persistent.—Resembles *Sphærocaryum elegans* and often mixed with it in Herbaria. As Trimen has pointed out (*Journ. Linn. Soc. l. c.*) this, according to *Herb. Linn. & Fl. Zeyl.* is *P. arborescens,* Linn., described as being as high as the loftiest trees. This error has no doubt originated from its having been accidentally assorted with an *Arundinaria* in Herb. Linn.

30. **P. turgidum,** *Forsk. Fl. Æg. Arab.* 18; shrubby, rootstock very stout creeping, stem woody, branches alternately or proliferously fascicled at the sheathed nodes, leaves short rigid, panicle erect glabrous branches solitary distant simple or sparingly divided, spikelets solitary $\frac{1}{10}$–$\frac{1}{8}$ in. subglobose pale, gls. coriaceous cymbiform, I = III or nearly so orbicular 5–7-nerved, II broadly ovate acute 7-nerved, III acumi-

nate 9-nerved paleate male, IV small ovoid acute quite smooth polished. *Del. Fl. Ægypt. Ill.* 51, t. 9, f. 2; *Nees Agrost. Bras.* i. 172 (*in note*); *Trin. Pan. Gen.* 221, *Sp. Gram. Ic.* t. 227; *Kunth Enum. Pl.* i. 97; *Steud. Syn. Gram.* 88; *Duthie Fodd. Grass. N. Ind.* 13.

SIND and CENTRAL INDIA, *Duthie l. c.*—DISTRIB. Beluchistan and westward to Egypt.

Rootstock sometimes as thick as the little finger, root fibres strong woolly; branches 2–4 ft., hard, solid, smooth, sometimes as thick as a goose-quill, clothed at the base with imbricating scarious scales, and the nodes higher up with long scarious leaf sheaths, branches sometimes forming dense subglobose fascicles at the nodes 2–3 in. diam., with many short reduced panicles. *Leaves* at the base of the stem 2–3 in. long, flat, coriaceous linear-lanceolate, acuminate, smooth, at the upper nodes reduced to brown chartaceous open sheaths with a deciduous setiform blade, ligule a row of short hairs. *Panicles* very variable, 1–5 in. long; rachis and branches slender, subscaberulous; pedicels short, tips cupular. *Spikelets* subsecund, young ovate-lanceolate acute, mature turgid; palea of gl. III broad with ciliate keels; of IV coriaceous like the gl. and shining. *Anthers* purple. *Styles* short, stigmas short, primrose-purple. — A remarkable grass, intermediate between *Brachiaria* and *Effusæ* allied to no other Indian, with something of the habit of *Spinifex*. Duthie is my authority for the Indian habitats of this fine species; that of Sind is natural, the Central Indian I doubt exceedingly. As a species it is unmistakable. I should be disposed to refer it to the *Brachiaria* section, but Trinius places it under his section *Miliaria*, which answers to *Effusæ*.

** Gl. I much shorter than III.

† Annual erect leafy grasses.

31. **P. miliaceum,** *Linn. Sp. Pl.* 58; leaves linear acuminate and sheaths clothed with long spreading hairs, base not cordate, panicle thyrsiform usually decurved or nodding, branches long slender suberect, spikelets $\frac{1}{6}$–$\frac{1}{6}$ in. ovate-oblong cuspidately acuminate glabrous, glumes channelled between the nerves I = $\frac{2}{3}$ III 5–7-nerved, II and III subequal 7–11-nerved, III paleate neuter, IV broadly ovate turgid 3–5-nerved polished. *Host Gram. Austr.* ii. 16, t. 20; *Kunth Enum. Pl.* i. 104, *Suppl.* 81; *Trin. Diss.* ii. 186, *Pan. Gen.* 194, *Sp. Gram. Ic.* t. 221; *Steud. Syn. Gram.* 77; *Reichb. Ic. Fl. Germ.* t. 82; *Roxb. Fl. Ind.* i. 310; *Wall. Cat.* n. 8716; *Trim. Cat. Ceyl. Pl.* 105; *Aitchis. Cat. Panjab. Pl.* 158; *Duthie Grass. N. W. Ind.* 5, *Field & Gard. Crops.* t. 23, *Fodd. Grass. N. Ind.* 9; *Franch. & Sav. En. Pl. Jap.* 165. P. asperrimum, *Fisch. Cat. Hort. Gorenk. ex Jacq. Eclog. Gram.* 46, t. 31; *Nees Agrost. Bras.* 199; *A. Rich Tent. Fl. Abyss.* ii. 374; *Steud. l. c.* P. callosum, *Hochst. ex A. Rich l. c.* P. densepilosum, *Steud. l. c.* 72, *ex Miq. Prolus Fl. Jap.* 275. P. Milium, *Pers. Syn.* i. 83. P. pilosum, *Herb. Roxb. & Herb. Heyne ex Wall. Cat. l. c.* P. striatum, *Spreng. Syst.* i. 318. Milium esculentum, *Moench Meth.* 203. M. Panicum, *Mill. Gard. Dict. Ed.* 8, n. 1.

Cultivated or naturalized (Wild ?) throughout the hotter parts of INDIA, AFRICA, and other hot countries.

Annual; stems tufted, 2–4 ft., stout, branching, leafy up to the panicle, often as thick as the little finger below. *Leaves* 6–12 by $\frac{1}{2}$–1 in., glabrous ciliate or hirsute, base narrow, margin scabrid often ciliate; sheaths lax, deeply grooved, clothed with very long spreading or reflexed hairs; ligule of long hairs. *Panicle* 6–12 in., branches filiform, fascicled, densely crowded, scaberulous; pedicels often much longer than the spikelets, but sometimes much shorter. *Spikelets* green, erect, turgid; gl. IV pale, sometimes dorsally 5-streaked.—Closely allied to *P. miliare* and *P. psilopodium* with which it possibly hybridizes, but with much larger spikelets. I am far from satisfied that I have not erred in the synonyms cited for these three species, which are almost inextricably mixed. For a learned discussion on the Millet, the cultivation of which in Europe dates from prehistoric times, see A. de Candolle's "Origine de Plantes Cultivés," p. 302. Munro has attached the following to a specimen from Bombay (Woodrow, No. 89), "I believe this to be an uncultivated form of *P. miliaceum*"—it has spinulosely toothed scabrid leaves, and a perfectly erect panicle with very long erect branches, and few spikelets.

32. **P. miliare,** *Lamk. Ill. Gen.* 173; leaves linear hairy base rounded, panicle contracted or thyrsiform much branched erect or nodding, branches slender erect alternate, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. solitary or geminate usually shorter than their pedicels turgidly ovoid or ellipsoid acute, gl. I $= \frac{1}{3}$ III broadly ovate acute 3–5-nerved, nerves arching, II ovate-lanceolate 11–13-nerved, III 9-nerved paleate neuter, IV from oblong to broadly ovate acute shining often 3–5-streaked dorsally. *Rottl. in Neue Schrift. Ges. Naturf. Berol.* iv. (1803) 83: *Roxb. Fl. Ind.* i. 309; *Wall. Cat.* 8712 C. *in part,* F. G. H. I.; *Wight Cat.* n. 1629; *Kunth Enum. Pl.* i. 104; *Trim. Cat. Ceyl. Pl.* 105; *Aitchis. Cat. Panjab Pl.* 159; *Nees Fl. Afr. Austr.* 40; *Duthie Grass. N.W. Ind.* 5, *Field. & Gard. Crops.* 7, t. 26, *Indig. Fodd. Grass.* t. 46, *Fodd. Grass. N. Ind.* 10. P. attenuatum, *Willd. Enum. Hort. Berol.* 1033; *Nees Agrost. Bras.* 173; *Trin. Diss.* ii. 226. P. brevifolium, *Balb. ex Nees Fl. Afr. Austr.* 40. P. Menieri, *Koen. ex Nees l. c.* P. miliaceum, *Thw. Enum. Pl. Zeyl.* 360. P. miliaceum, var. *Rottl. in Neue Schrift. l. c.* P. musciparum, *Herb. Linn. ex Munro in Journ. Linn. Soc.* vi. (1862) 39. P. psilopodium, *Wight Cat.* n. 1633a. P. simplex, *Rottl. ex Trin. Gram. Panic.* 216; *Steud. Syn. Gram.* 67. P. sumatrense, *Roth Nov. Sp.* 50; *Kunth l. c.*—Panicum, *Wall. Cat.* n. 8718 B, 8720.

Cultivated or naturalized (or native?) throughout INDIA and CEYLON.—DISTRIB. Tropics cult.

Annual. *Stem* 1–3 ft., rather slender, erect or base geniculate, simple or branched, usually leafy up to the panicle. *Leaves* 1–2 ft. by $\frac{1}{2}$–1 in., flat, and sheaths rarely hirsute with tubercle-based hairs, acute or acuminate; ligule a narrow row of hairs. *Panicle* 2–10 in., lower branches long, pedicels of spikelets sometimes $\frac{1}{2}$ in. *Spikelets* glabrous, rather flattened, usually green or purplish; gl. I variable, white, membranous, margins overlapping at the base, nerves arching and anastomosing; II and III herbaceous; palea of III as long as its gl.—If I remember aright *P. miliare* was conjectured by Munro to be a cultivated form of *P. psilopodium*; and except in the greater size, more contracted panicle, rather larger spikelets and usually shorter pedicels of *P. miliare* I fail to find characters whereby to separate them, and these are not very reliable. In its common state the grain of *miliare* is broader than in any form of *psilopodium* and much darker colrd. *P. simplex,* Rottl. is a weak flaccid form from Tranquebar, growing in shade. Trinius distinguishes it from *P. psilopodium,* by the scabrid pedicels of the spikelets, but they are quite glabrous in Rottler's specimen of *simplex.* I am not at all satisfied that I have rightly identified the synonymy of this and *P. psilopodium.*

Var. *hirtum*; upper leaf-sheaths with long spreading hairs. P. hirtum, *Wall. mss. in Herb. Linn. Soc.* Panicum, *Wall. Cat.* n. 8718 (*in part*).—Burma, *Wallich.*—Wallich's sheet has three different looking plants; viz. 8718 A, from Malloon, with the panicle of *psilopodium,* and hirsute sheaths; B from the banks of the Irawaddy with hirsute sheaths and the panicle of *miliare*; along with these is a plant with a similar panicle to the last but with glabrous sheaths.

33. **P. psilopodium,** *Trin. Gram. Panic.* 217; leaves narrow glabrous base rounded, panicle effuse branches capillary at length spreading, spikelets $\frac{1}{12}$–$\frac{1}{8}$ in. geminate ovate-lanceolate acute, pedicels capillary usually

longer than the spikelets, gl. I = $\frac{1}{2}$ III or less broader than long 3–5-nerved tip obtuse or rounded, II ovate acuminate 11-nerved, III as long as II 9-nerved paleate neuter, IV oblong obtuse apiculate. *Nees Agrost. Bras.* 199; *Kunth Enum. Pl.* i. 100; *Steud. Syn. Gram.* 83; *Thwaites Enum. Pl. Zeyl.* 360; *Trim. Cat. Ceyl. Pl.* 105; *Aitchis. Cat. Panjab. Pl.* 161; *Duthie Grass. N.W. Ind.* 6, *Field & Gard. Crops.* i. t. 23, *Fodd. Grass. N. Ind.* 10 (*in note*). P. Chintaman, *Herb. Ham. ex Wall. Cat.* 8712 D. P. glabrum, *Herb. Heyne ex Wall. Cat.* n. 8712 C (*in part*). P. miliare, *var.* Meneri, *Herb. Madr. ex Wall. Cat.* n. 8712 B. P. miliare, *Wall. Cat.* n. 8712, A (*in part*) B (*in part*) D. P. mucronatum, *Wall. Cat.* n. 8717 (*in part*). P. ramosum, *Koen. ex Herb. Banks.* P. Royleanum, *Nees ex Duthie Grass. N.W. Ind.* 6. P. virgatum, *Roxb. mss. ex Steud. Nom. Ed.* II ii. 265.—Isachne, *Wall. Cat.* 8659 B (*in part*).

Hotter parts of INDIA, ascending to 4000 ft., BURMA, MALACCA and CEYLON.

Annual. *Stem* 1–2 ft., rather slender, simple or branched, usually leafy up to the panicle. *Leaves* 3–12 by $\frac{1}{6}$–$\frac{1}{3}$ in., flat, acute or acuminate, usually glabrous; sheaths glabrous or hirsute, mouth with a few hairs; ligule a narrow row of hairs. *Panicle* 2–8 in.; lower branches long; pedicels sometimes $\frac{1}{2}$ in. long. *Spikelets* rather flattened, dorsally green or purplish; gl. I variable, membranous, white, margins overlapping at the base, nerves 3–5 anastomosing; II and III herbaceous, palea of III as long as the gl.; IV shining—Nees (Agrost. Bras.) describes gl. II as 7-nerved probably by error. Diseased states occur with gl. IV enlarged exserted flattened. Trinius describes the spikelets as elliptic and mucronate, and the panicle as contracted below and lax above, but this latter is a matter of development. Trinius gives as a character of *P. psilopodium* glumes open, which is a conspicuous one in *P. trypheron*, but I do not recognize it in this. He further says that he has seen this species in Herb. Lindley under the names of *P. ramosum*, Koen. and *P. virgatum*, Roxb. I have in vain tried to verify this in Lindley's Herb., and conclude that for Herb. Lindley Herb. Mus. Brit. is intended. Duthie, Fodd. Grass. N. Ind. 10 (*in note*) says that he is unable to distinguish *P. psilopodium* from *P. miliare*. Dr. Stapf, who has carefully reviewed a multitude of specimens of *P. miliare* and *psilopodium*, is disposed to think them separable, though the former is probably a cult. form of the latter. The true *psilopodium* he thinks has nearly always glabrous leaves, smaller spikelets and a shorter gl. I.

Var. *coloratum*; panicle violet or purple.—Simla and Garwhal, up to 6000 ft., Mt. Abu, *Duthie*; Shan Hills, Burma, *Collett.*

34. **P. trypheron,** *Schult. Mant.* ii. 244; leaves narrow, panicle effuse, branches long stiff filiform divaricate scaberulous, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. often geminate, pedicels capillary, gls. divergent strongly nerved I, II and III broadly ovate, I = $\frac{1}{2}$ III or longer acuminate 5-nerved, II and III subequal recurved subcuspidate 9-nerved, III paleate neuter, IV broadly oblong obtuse shining often 5–nerved. P. coloratum, β hirsutum, *Nees in Herb. Lindl.* (*ex Steud.*). P. confine, *Hochst. in Schimp. Pl. Abyss.* n. 1230; *A. Rich. Tent. Fl. Abyss.* ii. 373; *Steud. Syn. Gram.* 72. P. jumentorum, *A. Rich. l. c.* 373 (*non Pers.*). P. miliare, *Wall. Cat* n. 8712 A (*in part*) E. P. miliare, β simplex, *Herb. Royle.* P. mucronatum, *Heyne in Wall. Cat.* n. 8717 (*in part*). ?P. notatum, *Duthie Grass. N.W. Ind.* 6. P. Neesianum, *Wight & Arn. ex Steud. l. c.* 74. P. porphyrrhizos, *Steud. l. c.* P. rigidum, *Herb. Heyne ex Wall. Cat* n. 8714 A (*in part*). P. Roxburghii, *Spreng. Syst.* i. 320; *Kunth Enum. Pl.* i. 126; *Steud. l. c.* 98. P. tenellum, *Roxb. Fl. Ind.* i. 306; *Duthie l.c.* 7.—Panicum, *Wall. Cat.* n. 8713, 8714 A (*in part*).

The PANJAB and GANGETIC PLAIN to CHITTAGONG and southward to MADRAS. KUMAON, up to 5000 ft.—DISTRIB. China, Borneo, Afr. trop.

Annual. *Stem* 6 in. 3 ft., tufted, erect or geniculate below, leafy chiefly near the base; nodes rarely rooting. *Leaves* 3–10 by $\frac{1}{8}$–$\frac{1}{4}$ in., usually flat, thin, acuminate, glabrous hairy or hirsute on both surfaces or beneath only; ligule short, fimbriate. *Panicle* 4–10 in., erect, often as broad as long. *Spikelets* green, yellow or purplish; gl. IV. variable in breadth, and in colouring, from pure white to greenish-brown, with 3–5 darker dorsal stripes.—Nees Fl. Afr. Austr. 51 has referred *P. trypheron*, Sch. to *P. curvatum*, L., a very different plant, and not a native of Bengal.

35. **P. humile,** *Nees ex Steud. Syn. Gram.* 84; dwarf, slender, leaves very narrow glabrous base narrow, panicle broad effuse lax-fld., branches subsolitary long spreading naked few-fld., branchlets capillary, spikelets $\frac{1}{16}$ in. pedicelled ovate acute glabrous, gl. I = $\frac{2}{3}$ III broadly ovate acuminate 3-nerved, II longest ovate-lanceolate acuminate 3-nerved, III ovate acute 3–5-nerved paleate neuter, IV much shorter broadly oblong obtuse pale shining. *Thw. Enum. Pl. Zeyl.* 360 (CP. 3243); *Trim. Cat. Ceyl. Pl.* 105; *Duthie Grass. N.W Ind.* 4, *Fodd. Grass. N. Ind.* 9. P. tenellum, *Griff. Notul.* iv. 21, *Ic. Pl. Asiat.* t. 139, f. 194 (*non Roxb.*).

The Panjab. *Thomson*; Bengal, Assam, Sikkim, Arracan, and southward to Ceylon.—Distrib. Borneo.

Annual. *Stem* 2–24 in., erect or geniculate below, much branched and often flowering from the base. *Leaves* 2–8 by $\frac{1}{8}$–$\frac{1}{6}$ in., flat, base hardly cordate; sheath glabrous, or mouth sparsely hairy. *Panicle* 1–3 in., often as long as the whole plant, very laxly and diffusely branched. *Spikelets* minute, pale or reddish.

36. **P. hydaspicum,** *Edgew. in Journ. Linn. Soc.* vi. (1862) 207; dwarf, leaves linear-lanceolate hirsute base narrow, panicle effuse much branched glabrous, branches erecto-patent alternate rarely opposite and branchlets and pedicels filiform, spikelets $\frac{1}{20}$–$\frac{1}{15}$ in. equalling or shorter than their pedicels solitary ovate acute glabrous, gls. membranous, nerves strong, I = $\frac{2}{3}$ III ovate acuminate 5-nerved, II and III subequal ovate subacute 5–7-nerved, III paleate, IV elliptic obtuse brown shining. *Aitchis. Cat. Panjab. Pl.* 159; *Duthie Grass. N.W. Ind.* 4. P. humile, *Aitchis. l. c.*

The Panjab and Upper Gangetic Plain; from the Ravee to the Indus. *Edgeworth*, &c. Central Provinces, *Duthie*.

Annual. *Stem* 6–18 in., geniculately ascending, rather stout below, branching from the very base. *Leaves* and *sheaths* clothed more or less thickly with long white hairs; sheaths inflated in some states. *Leaves* 1–2 by $\frac{1}{6}$–$\frac{1}{3}$ in., flat, soft, acute; ligule a row of hairs. *Panicle* 2–4 in., peduncled, erect, ovoid rachis, and branches quite smooth, hardly flexuous. *Spikelets* pale green, except the dark brown gl. IV; palea of III smaller than the gl., oblong.

37. **P. cæsium,** *Nees in Hook. Kew Journ.* ii. (1850) 97; erect, stout, hairy, leaves linear base narrow subcordate, panicle large erect subthyrsiform much branched, branches suberect lower fascicled, spikelets $\frac{1}{12}$–$\frac{1}{10}$ in. subsessile except the terminal broadly ovoid turgid nerves anastomosing, gl. I = $\frac{1}{4}$–$\frac{1}{3}$ III ovate obtuse 5-nerved, II and III subequal ovate acute 7–9-nerved, palea linear, IV = II elliptic-ovate obtuse pale smooth shining. P. reticulatum, *Thw. ex Trimen Cat. Ceyl. Pl.* 105 (*non Griseb.*).—Panicum, *Wall. Cat.* n. 8744.

Bengal, in the Jheels, J. D. H. & T. T. Cachar, *Keenan*. Malacca, *Griffith*. Nicobar Islds., *Kurz*. Ceylon; Pasdoon Corl, *Thwaites* (CP. 3890).—Distrib. Borneo, N. Guinea, Philippines.

Annual. *Stems* 2–3 ft., densely tufted, erect from the root. *Leaves* 6–10 by $\frac{1}{4}$–$\frac{1}{2}$ in., flat, soft, and sheaths more or less densely clothed with soft white spreading hairs; ligule a ridge of hairs. *Panicle* 10–18 in. long; branches angular, scaberulous. *Spikelets* solitary or geminate, red-brown. *Glumes* rather soft; II deciduous; IV pale yellow or brownish, sessile, margins narrowly incurved.—The Bornean and Philippine specimens are more slender and less hairy than the Indian.

†† Perennials.

§ Glume I very small, suborbicular, white, nerveless; (0 in *P. subeglume*); III 3–9-nerved, paleate or not.—Spikelets usually very shortly pedicelled.

36.* **P. maximum,** *Jacq. Ic. Pl. Rar.* i. t. 13; *Coll.* i. 76; tall, stout, erect, leafy, leaves long broadly linear or linear-lanceolate glabrous, panicle large decompound, lower branches whorled usually hairy, pedicels unequal capillary, spikelets $\frac{1}{10}$–$\frac{1}{12}$ in. solitary or in pairs elliptic-oblong acute or obtuse glabrous, gl. I = $\frac{1}{4}$ III white 0–3-nerved, II and III subequal 3–7-nerved, III paleate male, IV elliptic subacute transversely rugulose. *Sw. Fl. Ind. Occ.* i. 170; *Nees Agrost. Bras.* 166, *Fl. Afr. Austr.* 36; *Trin. Gram. Panic.* 221; *Pan. Gen.* 180; *Steud. Syn. Gram.* 72; *Wall. Cat.* n. 8715 A. B (*in part*) D.; *Trim. Cat. Ceyl. Pl.* 105; *Aitchis. Cat. Panjab Pl.* 159; *Griseb. Fl. Brit. W. Ind.* 549; *Baker Fl. Maurit.* 436; *Boiss. Fl. Orient.* v. 439. P. altissimum, *Brouss. Elench. Hort. Monsp.* (1805) 42; *Dalz. & Gibs. Bomb. Fl. Suppl.* 98. P. confusum, *Trin. ex Steud. Nom. Ed.* II ii. 254. P. eburneum, *Trin. Pan. Gen.* 180; *Steud. Syn. Gram.* 73. P. Equisetum, *Nees, ex Doell in Mart. Fl. Bras.* ii. II, 206. P. fasciculatum, "*Pl. Carib. non Sw.,*" *Griseb. Fl. Brit. W. Ind.* 549. P. gongylodes, *Jacq. Eclog. Gram.* 30, t. 21. P. jumentorum, *Pers. Syn.* i. 83; *H. B. & K. Nov. Gen. & Sp.* i. 104; *Thw. Enum. Pl. Zeyl.* 361: *Duthie Grass. N.W. Ind.* 5, *Fodd. Grass. N. Ind.* 9. P. læve, *Lamk. Ill.* i. 172. P. longipes, *Wight & Arn. in Wight Cat.* n. 1638. P. megiston, *Schult. Mant.* ii. 248. P. pamplemoussense, *Steud. l. c.* 71. P. polygamum, *Sw. Prodr. Veg. Ind. Occ.* 24. P. praticolum, *Saltzm. ex Doell in Mart. Fl. Bras.* ii. II, 203. P. trichocondylum, *Steud. l. c.* 74. P. tuberculatum, *Presl Rel. Hænk.* i. 307.

Cultivated in many parts of INDIA.—Native of Africa.

Perennial? 8–10 ft. high; stem branching, branches erect, nodes naked or bearded. *Leaves* 1–2 ft. by $\frac{1}{2}$–1 in., gradually narrowed from a small rounded or auricled base to a long filiform point, quite smooth, nearly glabrous; sheaths long, mouth villous; ligule of long hairs. *Panicle* 1–2 ft., quite erect, branches erect, filiform, smooth; pedicels usually shorter than the *spikelets*, glabrous or very sparsely pubescent, bright green, glistening, gls. thin.—This grass is described both as an annual and a perennial. Trinius' description of *P. eburneum* I think refers it to *maximum*; it is described as from Nepal.

Var. *β*, *Boiss. l. c.*; spikelets shortly hairy, gl. III neuter.—Peshawur, *Aitchison.* Affghan.—Apparently a smaller plant than typical *P. maximum.*

37. **P. repens,** *Linn. Sp. Pl. Ed.* 2, 87; stem creeping and stoloniferous below, leaves distichous linear-lanceolate flat or convolute glaucous, panicle usually contracted irregularly branched, branches 2–3-nate strict, spikelets $\frac{1}{10}$ in. sessile or shortly pedicelled ovate-lanceolate acute white, gl. I = $\frac{1}{6}$ III orbicular, II and III subequal ovate acute sub-5-nerved, III paleate or not male or neuter, IV ovate acute smooth. *Sibth. Fl. Græc.* i. t. 61; *Nees Agrost. Bras.* 171; *Kunth Enum. Pl.* i. 103; *Trim. Cat. Ceyl. Pl.* 105;

Aitchis. Cat. Punjab Pl. 160; *Duthie Grass. N.W. Ind.* 6, *Fodd. Grass. N. Ind.* 11; *Boiss. Fl. Orient.* vii. 440; *Benth. Fl. Hongk.* 412. P. airoides, *Br. Prodr.* 190; *Kunth l. c.* 122. P. aquaticum, *A. Rich. Tent. Fl. Abyss.* ii. 373. P. arenarium, *Brot. Fl. Lusit.* i. 82, *Phyt. Lusit.* i. 15, t. 6; *Nees Agrost. Bras.* i. 170, *Fl. Afr. Austr.* 37; *Trin. Pan. Gen.* 181. P. coloratum, *Cav. Ic.* ii. 6, t. 110. P. convolutum, *Beauv. ex Spreng. Syst.* i. 319. P. hygrocharis, *Steud. l. c.* 72. P. ischæmoides, *Retz. Obs.* iv. 17; *Rottl. in Neue Schrift.* iv. (1803) 185; *Steud. l. c.* 98; *Wight Cat.* n. 1627; *Wall. Cat.* n. 8710. P. multinode, *Lamk. Encycl.* iv. 747 (*ex Nees Agrost. Bras.*). P. paludosum, *Hochst. ex Steud. l. c.* 72 (*not of Roxb.*). P. polystachion, *Ucria, Hort. Reg. Panorm.* 54. P. psilopodium, *Trin. ex Wight Cat.* n. 1633 C.; *Herb. Strach. & Winterb.* No. 5. P. Roxburgianum, *Schult. Mant.* ii. 245. P. sarmentosum, *Hb. Wight ex Wall. Cat*, 8710 C. ?P. uliginosum, *Roxb. Fl. Ind.* i. 308; *Wall. Cat.* n. 8710 A; *Kunth l. c.* 126.—Panicum, *Wall. Cat.* n. 8714 E, 8746.

Throughout INDIA, by banks of streams and in dry places, from the Panjab eastwards and southwards. CEYLON, *Walker, Gardner.*—DISTRIB. S. Europe, Asia, Afr., Amer.

Stems 2–6 ft., erect or ascending from a stout creeping rootstock, leafy, simple or branched below, nodes rooting. *Leaves* 3–6 in., strict, often glaucous, usually narrow and involute, smooth, glabrous or hairy on the upper surface, margins sometimes toothed towards the ciliate rounded base; sheaths with ciliate margins; ligule a narrow coriaceous ring. *Panicle* 3–8 in., branches usually erect, very slender, angular, scaberulous; pedicels short, tip cupular. *Spikelets* erect, quite glabrous; gl. I membranous, nerveless or 3-nerved; palea of III truncate; IV shortly broadly stipitate, pale. *Anthers* red.—Roxburgh distinguishes his *P. uliginosum* from *P. paludosum* (proliferum, *Lamk.*) by the tetragonous smooth branches of the panicle, whereas in *P. paludosum* these are trigonous with acute hispid angles. I have seen no authentic specimens of his *P. uliginosum*, but his figure of "Gundru" (the native name which he gives for it) does not show this character of the panicle.

38. **P. proliferum**, *Lam. Encycl.* iv. 747; stem erect from a floating base, leaves linear or ensiform acute serrulate usually flat, panicle with long virgate spreading branches bearing short few-fid. branchlets and solitary sessile or shortly pedicelled spikelets which lie parallel to the branchlet, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. lanceolate, gl. I = $\frac{1}{6}$–$\frac{1}{4}$ III orbicular, II ovate acuminate 9-nerved, III lanceolate 9-nerved paleate or not, IV oblong acuminate smooth. *Nees Agrost. Bras.* 170; *Kunth Enum. Pl.* i. 100; *Steud. Syn. Gram.* 71; *Muell. Fragment.* viii. 191 (*the King's Creek plant*). P. aurantiacum, *Ham. ex Wall. Cat.* n. 8714 B. P. gongylodes, *Jacq. Eclog. Gram.* iii. t. 21. ?P. decompositum, *Duthie Grass. N.W. Ind.* 3. P. decompositum, *var.* paludosum, *Trim. Cat. Ceyl. Pl.* 105. P. elephantipes, *Nees Agrost Bras.* 165. P. Elliottii, *Trin. ex Nees l. c.* 170. P. fistulosum, *Hochst. ex Steud. l. c.* 71. P. natans, *Koen. ex Trin. Panic. Gen.* 237. P. paludosum, *Roxb. Fl. Ind.* i. 307; *Wall. Cat.* n. 8711; *Nees Fl. Afr. Austr.* 35; *Kunth l. c.* 126; *Griff. Notul.* 37, *Ic. Pl. Asiat.* t. 139, f. 127; *Duthie Fodd. Grass. N. Ind.* 11. P. repens, *Thw. Enum. Pl. Zeyl.* 360; *Trim. Cat. Ceyl. Pl.* 105; *Trin. Pan. Gen.* 179. P. rigidum, *Heyne in Herb. Rottl.*—Panicum, *Wall. Cat.* n. 8714A. (*in part*) B. C. D.

Marshes and still waters throughout the low countries of INDIA, from the Panjab to Assam and southward. CEYLON.—DISTRIB. Tropics generally.

Perennial. *Stem* 2–3 ft. or more; lower nodes spongy, as thick as the little finger. *Leaves* 6–12 by $\frac{1}{4}$–$\frac{2}{3}$ in., base broad but hardly cordate; sheaths loose;

ligule a ridge of hairs. *Panicle* 6–10 in., often nearly as broad, lower branches whorled and fascicled, trigonous, scaberulous. *Spikelets* green, variable in size, terete, palea of gl. III 0, or minute, or linear, neuter or male rarely bisexual.—Closely allied to (if not a more luxuriant aquatic form of) *P. repens*, and confused with it as to synonymy; but a coarser plant, with a more spreading panicle, more acuminate spikelets and a more oblong gl. IV. Further, *P. repens* has normally shorter glaucous narrower convolute leaves, and a more irregularly branched panicle. Also very near the Australian P. *decompositum*, Br., which has normally a decompound panicle with more slender spreading branches and branchlets, and distant solitary spikelets.

Dr. Stapf has made for me a careful analysis of the spikelets of a large series of specimens, and I have made many myself, with the view of testing the value of the absence or presence of the palea in gl. III, and its sexuality. As examples he finds in 9 spikelets taken promiscuously 3 epaleate and 6 with reduced paleas. In 5 others all are paleate and male, in 3 others all paleate but neuter. In 9 others all epaleate. In a branch with 10 spikelets, 9 of them had gl. III paleate, 1 epaleate. Of 6 spikelets from near the base of a branch, 3 epaleate, 2 male with a rudimentary ovary, 3 paleate and female. Of 8 spikelets from a branch in the lower part of a panicle, 2 lowest epaleate, 6 paleate and bisexual.

39. **P. subeglume,** *Trin. Pan. Gen.* 204; stem slender, leaves linear, base narrowed, panicle large effuse, rachis and branches flexuous capillary, spikelets $\frac{1}{12}$ in. pedicelled elliptic-oblong subacute, gl. I and II absent, III and IV equal, III 5–7-nerved glabrous or silky, IV elliptic-oblong or lanceolate cuspidate. *Steud. Syn. Gram.* 84. P. arcuatum, *Br. ex Nees in Wight Cat.* n. 1639 (*non Br. Prodr.*). P. Brownianum, *Wight & Arn. ex Steud. l. c.* 98. P. Torreyanum, *Wight et Arn. ex Steud. Nom. Ed.* II, ii. 264; *Wight Cat.* n. 1634. Milium capillare, *Roth Nov. Sp.* 39; *Kunth Enum. Pl.* i. 67. M. tomentosum, *Koen. ex Rottl. in Ges. Naturf. Fr. Neue Schr.* iv. (1803) 220; *Steud. Syn. Gram.* 34; *Kunth l. c.* 66.—Isachne? *Wall. Cat.* n. 8659.

SOUTHERN DECCAN, *Heyne*; Madura, *Rottler*; Palaveram, *Wight*.

Perennial. *Stem* 1–2 ft., soft. *Leaves* 3–6 by $\frac{1}{2}$ in. or less, finely acuminate, and sheaths glabrous softly hairy or tomentose; ligule short, membranous. *Panicle* 3–7 in., spreading, glabrous; lower branches suberect, alternate, divided from the base. *Spikelets* much shorter than their pedicels, erect, dorsally compressed. *Grain* linear-oblong, obtuse.—The absence of gl. I and II are characters of *Paspalum*, but the habit and inflorescence are those of a *Panicum*.

§§ Gl. I = $\frac{1}{3}$ to $\frac{3}{4}$ III, 5–7-nerved.

a Spikelets acute or acuminate. (See also *P. auritum*.)

40. **P. incisum,** *Munro ex Clarke in Journ. Linn. Soc.* xxv. (1890) 84, t. 33; stem slender, leaves long linear-lanceolate base narrow, panicle effuse very lax, rachis branches and pedicels very slender subscaberulous, pedicels very long, spikelets $\frac{1}{6}$ in. remote solitary elliptic acuminate, gl. I about = $\frac{2}{3}$ III ovate acute 1–3-nerved, II and III subequal, II 5-nerved, III 7-nerved, palea short, IV elliptic acuminate quite smooth polished margin narrowly inflexed. *Munro Cat. Pl. Griffith, &c., ined.* p. 56.

UPPER ASSAM; Naga hills, *Griffith*; Nambre forest, alt. 400 ft., *Clarke*.

Perennial. *Stem* 1–2 ft., quite glabrous. *Leaves* 5–10 by $\frac{1}{2}$–$\frac{2}{3}$ in., finely acuminate; ligule elongate-oblong, scarious. *Panicle* 3–6 in., usually sessile as it were on the upper leaf sheath. *Spikelets* many times shorter than their pedicels, obscurely articulate at the base; glumes distant on a distinct inarticulate racheola; II fugacious; IV rather shorter than II, brown.—Altogether resembles an *Isachne* in habit, and in the spikelet being obscurely jointed on the pedicel. A very closely allied plant collected by Beddome in the Anamallay hills has a much broader rounded and cordate leaf-base, the spikelets are too immature for description.

41. **P. antidotale,** *Retz. Obs.* iv. 17; tall, glabrous, branching, leaves linear flat base rounded, panicle large effuse or contracted, branches slender glabrous lower fascicled divided from the base, spikelets $\frac{1}{10}$ in. shortly pedicelled solitary or clustered ovoid acute, gl. I and II with broad membranous margins, I = ½ III broadly ovate acute 5-nerved, II and III subequal strongly 5–7-nerved, II obtuse, III paleate, IV ovate or oblong acute smooth. *Trin. Gram. Pan.* 227, *Pan. Gen.* 195; *Nees Agrost. Bras.* 201; *Kunth Enum. Pl.* i. 125; *Steud. Syn. Gram.* 77; *Wight Cat.* n. 1630; *Thw. Enum. Pl. Zeyl.* 360; *Trim. Cat. Ceyl. Pl.* 105; *Aitchis. Cat. Panjab Pl.* 158; *Duthie Grass. N.W. Ind.* 2, *Indig. Fodd. Grass.* t. 3, *Fodd. Grass. N. Ind.* 4; *Benth. Fl. Austral.* vii. 483; *Boiss. Fl. Orient.* v. 440. P. maximum, *Wall. Cat.* n. 8715 B (*in part*) C (*in part*). P. polygamum, *Herb. Madr. ex Wight Cat.* n. 1630. P. pruinosum, *Bernh. ex Trin. Pan. Gen.* 191. P. subalbidum, *Kunth Revis. Gram.* ii. 397, t. 112, *Enum.* 101. P. tenue, *Roxb. ex Wight Cat.* (*sub* n. 1628 *non Fl. Ind.*). Milium arundinaceum, *Koen. ex Wight Cat. l. c.*

The PANJAB and UPPER GANGETIC plain, and southward to the S. DECCAN and CEYLON.—DISTRIB. Affghan., Afric., trop. Austral.

Perennial, sometimes shrubby, with a stout creeping rootstock bearing villously sheathed stolons; branches as thick as a crow-quill; internodes solid, woody, terete, smooth; nodes thickened. *Leaves* 6 by $\frac{1}{6}$ in., narrowed from the base to the slender tip, flat, rather rigid, smooth on both surfaces, base narrow rounded, midrib distinct; nerves many, slender; sheaths quite smooth; ligule a ridge of hairs. *Panicle* 6 in. high, branches filiform, lower nearly 2 in. long, sparingly divided; branchlets rather short; capillary. *Spikelets* quite glabrous; gls. rather thin, pale green; palea of III nearly as long as the gl., 2-toothed, nerves strong or slender; IV shorter than III, shortly stipitate, coriaceous, margins incurved; palea as large as the gl. *Lodicules* minute, orbicular. *Filaments* very short; anthers linear-oblong. *Ovary* narrow; styles short, free, stigmas broad.—Roxburgh describes *P. tenue* as having "seeds ovate transversely waved," whereas they are quite smooth in *P. antidotale.*

42. **P. elegantissimum,** *Hook. f.*; tall, erect from the base, very slender, leaves subradical very long narrow softly pubescent base narrow, peduncle very long and slender, panicle effuse very broad laxly few-fld., branches long alternate distant solitary naked below and branchlets capillary quite smooth, spikelets $\frac{1}{10}$ in. few on each branchlet shortly pedicelled ovate acuminate, gl. I about ⅓ III ovate mucronate 5–7-nerved, II and III stipitate subequal ovate cuspidately acuminate, II 7-nerved 5 of the nerves strong above, III nerves 7 slender, palea small ovate, IV elliptic-oblong obtuse as long as II white shining smooth.

MALAY PENINSULA; Perak, *Ridley.*

Perennial. *Stem* 2–3 ft., tufted, and branched at the very base, stiff. *Leaves* chiefly subradical, 10–18 by $\frac{1}{8}$ in., gradually narrowed from the base to the slender tip, strict, suberect, softly hairy all over; mouth of sheath villous; ligule a fascicle of hairs. *Panicle* 12–18 by 6–12 in., scaberulous; branches 1–3 in. apart. *Spikelets* very few and remote, reddish; gl. I inserted much below the others; IV sessile by a broad base.—A most elegant grass.

43. **P. acroanthum,** *Steud. Syn. Gram.* 87; glabrous, erect, very slender, leaves narrow base contracted, panicle broad very effuse lax-fld.,

branches subsolitary naked below, and long spreading few-fld. naked branchlets capillary, spikelets $\frac{1}{12}$ in. long-pedicelled ovate-oblong acute glabrous or sparsely puberulous, gl. I = $\frac{1}{3}$ III ovate obtuse 1-nerved, II and III subequal subacute 5-nerved, III epaleate, IV elliptic-oblong subacute palea quite smooth. *Miq. Prolus. Fl. Jap.* 163; *Franch. & Sav. En. Pl. Jap.* ii. 162.

UPPER ASSAM; Mishmi Hills, *Griffith.*—DISTRIB. China, Japan.

Perennial. *Stem* 2–3 ft., erect, not or rarely branched; nodes glabrous. *Leaves* 3–5 by $\frac{1}{6}$–$\frac{1}{3}$ in., thin, flat, glabrous, as are the sheaths; ligule a few hairs. *Panicle* 3–4 in. long and broad, very lax, open, with few scattered brownish or greenish spikelets; branches branchlets and pedicels perfectly smooth, gl. I II & III membranous; IV thinly coriaceous, sessile.—I find no trace of a palea in gl. III of any specimen. No other species of this group has sparsely pubescent spikelets, except var. β of *P. maximum.*

β. Spikelets obtuse or subacute.

* *Gl. III. epaleate.*

44. **P. montanum,** *Roxb. Fl. Ind.* i. 313 (*excl. descr. gl. IV.*); stem tall firm, leaves long lanceolate base broad deeply cordate, panicle large loose, rachis branches and pedicels very long capillary smooth, spikelets $\frac{1}{16}$–$\frac{1}{12}$ in. solitary oblong obtuse or subacute, gl. I = $\frac{1}{4}$ III ovate 5-nerved, II and III subequal obtuse 5-nerved, III epaleate. IV ovate subacute smooth. *Kunth Enum. Pl.* 126; *Benth. Fl. Hongk.* 412; *Thw. Enum. Pl. Zeyl.* 360; *Trim. Cat. Pl. Ceyl.* 105. P. barbatulum, *Wall. ms.* P. courtallense, *Nees & Arn. ex Wight Cat.* n. 2342, *Herb.* 1362, 3049; *Steud. Syn. Gram.* 83. P. euchroum, *Steud. l. c.* 98. ? P. notatum (montanum, *Roxb.*), *Wight Cat.* 1362 (*non Retz*). P. trinapalium, *Hb. Ham. ex Wall. Cat.* n. 8722 A.—Panicum, *Wall. Cat.* n. 8719, 8722, 8739.

Hotter hilly parts of INDIA, from the lower Himalaya in Garwhal, *Duthie,* to Sikkim, Burma, the Khasia Hills, and southward to Penang and CEYLON.—DISTRIB. Malaya, China, Philippines.

Perennial. *Stem* 3–4 ft. or more. smooth, hard, sparingly branched. *Leaves* 5–7 by $\frac{3}{4}$–$1\frac{1}{4}$ in., thin, glabrous or pilose, smooth or scaberulous beneath, striate, base ciliate, midrib sometimes excentric; sheath glabrous or pubescent, mouth hairy; ligule obscure. *Panicle* 8–18 by 8–10 in.; branches whorled or alternate, axils sometimes glandular, lower strict and unbranched from 1–3 in. *Spikelets* terete, glabrous or faintly hairy; gl. II fugacious.—I do not find gl. IV to have 3 stripes as described and figured by Roxburgh, nor is it as broad as in his figure; but that the plant I have described is Roxburgh's is confirmed by a specimen so named by himself. *P. montanum* has been referred by Wight to the Sumatran *P. notatum,* Retz (Obs. iv. 18), but that plant is described as having scabrid branches of the panicle, purple spikelets, and acute glumes. The black spots at the axils of the panicle seen in dried specimens of both species, are probably due to a glandular secretion. Wallich's n. 8739, from Ava, has very long pedicels and broad glumes, and a broader gl. IV, but the latter is narrower than in Roxburgh's figure. Duthie (Grass. N.W. Ind. 5) gives Stewart as authority for this grass being found in marshes near Peshawur, but I suspect that *Isachne himalaica* was taken for it.

45. **P. humidorum,** *Ham. in Wall. Cat.* n. 8721; tall, slender, leaves linear base narrowly cordate, panicle large loose, rachis branches and (rather short) pedicels capillary smooth, spikelets $\frac{1}{20}$ in. ellipsoid obtuse glabrous, gl. I = $\frac{2}{3}$ III obtuse 3-nerved, II and III obscurely 5-nerved, III epaleate, IV ovate or oblong smooth.

ASSAM; Goalpara, *Hamilton.* SILHET, CACHAR, the KHASIA and NAGA HILLS, and the JHEELS.

Perennial. Gregarious in water (*Clarke*). Habit of *P. montanum*, but much more slender, with narrower leaves 4–8 by $\frac{1}{4}$–$\frac{1}{3}$ in., a smaller panicle, with shorter pedicels and much smaller spikelets. *Gl.* II fugacious.

Var. ? *perakense*; stem robust nearly as stout as a goose-quill below, leaves $\frac{1}{2}$ in. broad, spikelets broader, nerves stronger. Perak, *King's Collector* (n. 2546).—Probably a different species.

46. **P. khasianum,** *Munro mss.*; tall, leaves linear or linear-lanceolate base narrowly cordate, panicle very large branches very long slender smooth, pedicels long or short, spikelets subsolitary $\frac{1}{16}$–$\frac{1}{12}$ in. ellipsoid subacute glabrous, gl. I minute much shorter than III, nerves 0 or 3 obscure, II and III subequal 5-nerved, III epaleate, IV elliptic-oblong subacute smooth.

E. NEPAL and SIKKIM, alt. 4–7000 ft., *J. D. H.*, *Clarke.* KHASIA HILLS, in marshes, alt. 4-6000 ft., *Griffith*, &c.

Perennial. *Stem* prostrate and creeping below, then erect, 3–6 ft. *Leaves* 6–12 by $\frac{2}{3}$–$1\frac{1}{4}$ in., thin, glabrous hairy or subscabrid, many-nerved, base usually contracted with incurved auricles, not or obscurely ciliate; sheath smooth or hispidly hairy, mouth bearded; ligule very short, ciliate. *Panicle* 6–12 in., often as broad; lower branches nearly as long, solitary or fascicled, unbranched below.—Near *P. montanum*, differing in the narrower leaf-base, very short gl. I, and in gl. II not fugacious. Also near *P. sarmentosum*, from which the minute gl. I distinguishes it.

** *Gl. III paleate.*

47. **P. sarmentosum,** *Roxb. Fl. Ind.* i. 308; tall, branched, scandent, leaves long base narrow rounded, panicle pyramidal or ovoid loosely branched glabrous, rachis smooth, branches half-whorled capillary, spikelets $\frac{1}{18}$–$\frac{1}{16}$ in., sessile or shortly pedicelled ovoid tips obtuse ciliolate, gl. I = $\frac{1}{2}$ III or more obtuse or subacute 3–5-nerved, II and III subequal orbicular nerves 5 broad, III palea small narrow, IV small ellipsoid subacute dorsally rounded smooth. *Kunth Enum. Pl.* i. 126; *Steud. Syn. Gram.* 98. P. micrognostum & P. vacillans, *Steud. l. c.* 75; *Miq. Fl. Ind. Bat.* iii. 456. P. concinnum, *Nees in Hook. Kew Journ.* ii. (1850) 97; *Steud. l. c.* 78; *Miq. l. c.* 457. P. incomptum, *Trin. Diss.* ii. 200, *Gram. Panic.* 200, *Sp. Gram. Ic.* t. 232; *Kunth l. c.* 112; *Steud. l. c.* 88; *Nees in Mart. Fl. Bras.* ii. 207; *Herb. Wight* (*Kew Distrib.* n. 6492). P. maximum, *Wall. Cat.* n. 8715 E. P. tjicoyaense, *Steud. l. c.* 70. ? P. incomptum, *Duthie Grass. N. W. Ind.* 4. —Panicum, *Wall. Cat.* n. 8709.

ASSAM, SILHET, CACHAR, and the KHASIA HILLS, ascending to 5000 ft., CHITTAGONG, BURMA, and the MALAY PENINSULA.—DISTRIB. Malay Islds., China, Tonkin.

Perennial. *Stems* attaining 50 ft., often as thick as a goose-quill, solid, pubescent or glabrous, with whorls of long wiry slender branching roots at the bearded nodes below, whence the flowering branches issue. *Leaves* 12–15 by $\frac{1}{2}$–$1\frac{1}{4}$ in., linear-lanceolate, finely acuminate, base rounded or subcordate, smooth or hairy on both surfaces or beneath especially, many-nerved; sheaths smooth or sparsely hairy; ligule a brush of hairs. *Panicle* 6–12 in., very variable, branches erect or spreading, long or short, branchlets often creeping and entangling, straight or flexuous. *Spikelets* erect or spreading.—Duthie gives *P. incomptum* as a native of Garwhal, alt. 4–5000 ft., but I have not seen *P. sarmentosum*, Roxb. from the westward of Assam, and I suspect that *P. montanum* is the plant intended. Of *P. concinnum*, which is

Cuming's n. 2284, Miquel says, stem villous under the panicle. Benth. (Fl. Hongk.) refers *concinnum* to *sarmentosum*, and includes *incomptum*. I do not find the Hongkong specimen in Herb. Kew. There are no specimens of this in Herb. Linn. Soc. and Wallich's ticket No. 8709 has A. Hb. Finlayson, B. Silhet, C. Penang, D. Tavoy, E. Singapore.

Sect. VII. PTYCHOPHYLLUM. (See p. 28.)

48. **P. plicatum**, *Lamk. Encycl.* iv. 736; perennial, leaves plicate from linear-lanceolate to elliptic-oblong, panicle elongate lax-fld., branchlets often ending in a stiff bristle, gl. I = ½ III or more orbicular-ovate 5-nerved, II = ½ IV or longer 5–7-nerved obtuse, III = IV dorsally flattened acute 5–9-nerved, IV ovate-lanceolate rugulose. *Jacq. Eclog. Gram.* i. t. 1; *Trin. Gram. Panic.* 183, *Gen. Pan.* 161, *Sp. Gram. Ic.* t. 223; *Kunth Enum. Pl.* i. 94; *Wall. Cat.* n. 8705; *Griff. Notul.* iii. 24, *Ic. Pl. Asiat.* t. 139, fig. 229; *Thw. Enum. Pl. Zeyl.* 360 (*excl. P. costatum*); *Trim. Cat. Ceyl. Pl.* 105; *Duthie Grass. N.W. Ind.* 6, *Fodd. Grass. N. Ind.* 11; *Benth. Fl. Hongk.* 411; *Anderss. in Walp. Ann.* vi. 944. P. amplissimum, *Steud. l. c.* 54. P. asperatum, *Kunth Revis. Gram.* i. 39, *Enum. Pl. l. c.* 39; *Miquel Fl. Ind. Bat.* iii. 456. P. excurrens, *Trin. Pan. Gen.* 131, 249, *Sp. Gram. Ic.* t. 49; *Kunth Enum.* i. 94; *Benth. Fl. Hongk.* 412, *excl. syn.* P. Kleinianum, *Nees ex Anderss. in Walp. Ann.* vi. 946. P lene, *Steud. l. c.* 54. P. mauritianum, *Willd. ex Spreng. Syst.* i. 305. P. nepalense, *Spreng. l. c.* 321; *Kunth Enum.* i. 94; *Dalz. & Gibs. Bomb. Fl.* 291; *Aitchis. Cat. Panjab Pl.* 160; *Miq. l. c.* 448. P. nervosum, *Roxb. Fl. Ind.* i. 311; *Wall. Cat.* n. 8702. P. neurodes, *Schult. Mant.* ii. 228; *Wight Cat.* n. 1647; *Anderss. l. c.* 945; *Duthie Grass. N.W. Ind.* 5. P. paucisetum, *Steud. l. c.* 52. P. palmifolium, *Koen. in Naturforsch.* xxiii. (1788) 208; *Kunth Enum.* 93; *Anderss. l. c.* 945. P. Wallichianum, *Nees Fl. Afr. Austr.* 49; *Miq. l. c.* 449.—Panicum, *Wall. Cat.* n. 8703.

Throughout the moister hilly parts of India, from KUMAON in the Himalaya eastward, ascending to 5000 ft. in SIKKIM, the Shan Hills in BURMA, the NILGHIRIS, alt. 6000 ft., the MALAY PENINSULA, and CEYLON.—DISTRIB. China, Malay Islands.

Stem 1–8 ft., erect or ascending from a woody branched stock, from the thickness of a sparrow's to a swan's quill, leafy. *Leaves* 6–24 by ½–4 in., finely acuminate, sessile on the sheath or petioled, membranous or chartaceous, glabrous or sparsely hairy; sheath sometimes hispid, mouth ciliate; ligule short. *Panicle* thyrsoid, striate and erect with short branches, or effuse and drooping, 1–2 ft. long, with branches 2–4 in. long (spiciform in reduced states); branches, pedicels and their setiferous scabrid tips green or purplish. *Spikelets* ⅛ in., ovoid; gl. I = ½ III or less, very broadly ovate, obtuse or acute, 5–7-nerved, paleate or not, male or neuter; IV acuminate, coriaceous, more or less rugulose.—After a study of an immense suite of specimens of this species from all parts of India, I am unable to follow Andersson (in Walp. Ann. l. c.) in his separation of it into *plicatum*, *palmifolium*, *neurodes* and the seven vars. of the latter. These are, I think, all forms chiefly dependent on climate and age. Lamark's *P. plicatum* was described (1797) from a cultivated specimen of uncertain origin (Mauritius or St. Domingo), but Jacquin's excellent figure of it leaves no doubt of its identity with the Indian plant, for it resembles no American one. It has been widely cultivated for nearly a century, and a garden specimen in Bentham's Herb. supports the identification. I doubt *P. palmifolium* of Poiret being specifically different, it is described from an E. Indian specimen, though Grisebach (Fl. Brit. Ind. 547) identifies it with the W. Indian *P. sulcatum*, Aubl. Grisebach distinguishes *palmifolium* from *plicatum* by gl. II of the latter shorter than IV, and longer in *palmifolium*, but I find this a most variable character and not borne out by the material that Grisebach worked upon. He also describes gl. IV as ellipsoid, but it is ovate-lanceolate in both. Whether *P. sulcatum* is specifically different may be doubted. *P. excurrens*, Trin., is a small narrow-leaved flaccid (perhaps young) state, with a very slender panicle and erect branches; it is Wall. Cat. n. 8703, and a common Himalayan form. Wall. Cat. n. 8705 is a gigantic form from Silhet, where I found it abundantly.

48.* **P. flavescens,** *Sw. Prodr. Veg. Ind. Occ.* 23, *Fl. Ind. Occ.* i. 158; annual, leaves plicate linear-lanceolate, panicle erect branches spreading simple pubescent and bristly, spikelets subsecund, gl. I = $\frac{1}{4}$–$\frac{1}{3}$ III orbicular obtuse 3-nerved, II = $\frac{1}{2}$ IV apiculate 5–7-nerved, III = IV 5–7-nerved paleate male, IV ellipsoid acuminate transversely rugulose. *Kunth Enum. Pl.* i. 128; *Steud. Syn. Gram.* 80; *Griseb. Fl. Brit. W. Ind.* 547. P. barbatum, *Telf. ex Wall. Cat.* n. 8689 D. P. costatum, *Roxb. Fl. Ind.* i. 312; *Wall. Cat. l. c.*; *Kunth l. c.* 93; *Steud. l. c.* 64; *Anderss. in Walp. Ann.* vi. 947. P. fasciculatum β, *Nees Agrost. Bras.* 152. P. mauritianum, *Herb. Willd. ex Spreng. Syst.* i. 305. P. paractaenioides, *Trin. in Mem. Acad. Petersb.* Ser. 6, iii. II (1835) 219. P. Thouarsianum, *Nees ex Steud. l. c.* 62. P. plicatum *var.* costatum, *Baker Fl. Maurit.* 437. Setaria mauritiana, *Spreng. Syst.* i. 305 (*ex Baker*).

Cultivated in HORT. BOT. CALC., *Wallich.* SIAM? *Herb. Finlayson.*—DISTRIB. Trop. Amer.

Stem 3–6 ft., slender above, stout branched creeping and rooting below. *Leaves* 5–8 by ½–1 in., finely acuminate, narrowed to the very narrow base, thin, flaccid, softly hairy on both surfaces; sheath with hispidly ciliate margins towards the contracted mouth; ligule obscure. *Panicle* 3–5 in., ovate-oblong, branches 1–1½ in. *Spikelets* $\frac{1}{10}$ in., subsessile, green.—This grass is described as annual by Grisebach, and as perennial by other authors.

49. **P. rhachitrichum,** *Hochst. in Flora,* xxvii. (1844) 254; annual, nodes of stem pubescent, leaves plicate, panicle subpyramidal, branches slender spreading and pedicels laxly hairy, gl. I minute membranous, II and III subequal ovate-oblong obtuse, III paleate neuter, IV ellipsoid rugulose tip rounded. *Parlat. in Hook. Niger Flora,* 187; *Steud. Syn. Gram.* 63. P. chamaeraphis, *Nees ex A. Braun, Ind. Sem. Hort. Berol.* (1853), *App.* 20; *Anderss. in Walp. Ann.* vi. 947. P. homonymum, *Steud. l. c.* 48; *Duthie Grass. N.W. Ind.* 4 (homogynum).

SUBTROPICAL HIMALAYA; Dehra Dhun, *Royle*; Chamba, alt. 5000 ft., *Clarke*; Kumaon, *Duthie*; Sikkim, alt. 6000 ft. CHOTA NAGPUR and CALCUTTA, *Clarke.* DISTRIB. Africa trop.

Stems tufted, erect, 8–18 in., leafy. *Leaves* 6–8 by 1–1¼ in., flaccid, glabrous or sparsely hairy, base rounded; margins and mouth of sheath villous. *Panicle* 2–6 in., branches alternate spreading; rachis very slender, flexuous, bristle of pedicel twice as long as the spikelet. *Spikelets* $\frac{1}{10}$ in., secund, 1–2-seriate, loosely or densely imbricate, sometimes fascicled in the Calcutta specimens, dorsally compressed; gls. membranous, pale, nerves green; I 1–3-nerved; II 5–6-nerved, obtuse; III 5-nerved, palea minute.

Sect. VIII. GIBBOSÆ. (See p. 25.)

* *Spikelets usually shortly pedicelled.*

50. **P. trigonum,** *Retz. Obs.* iii. 9 (*excl. Syn. Burm.*); leaves 1–2 in., panicle contracted, branches short, spikelets $\frac{1}{16}$ in. very shortly pedicelled

hispidulous, gl. I = about $\frac{1}{2}$ III obtuse or acute 3-nerved, III 5-nerved. *Kunth Enum. Pl.* i. 116; *Nees Agrost. Bras.* 206; *Roxb. Fl. Ind.* i. 305; *Thw. Enum. Pl. Zeyl.* 359 (*in part*); *Trim. Cat. Ceyl. Pl.* 205. P. difforme, *Roth Nov. Sp.* 52. P. gibbum, *Steud. l. c.* 87. P. radicans, *Bühse in Miq. Pl. Jungh.* 375; *Miq. Fl. Ind. Bat.* iii. 453 (*non Retz*). P. repens and Burmanni, *Heyne ex Herb. Wight.* Aira repens, *Hb. Heyne ex Wall. Cat.* n. 8743 A.—Panicum, *Wall. Cat.* 8743 A. C.

Lower Bengal, *Wallich.* The Deccan Peninsula, *Heyne,* &c. Ceylon, *Walker,* &c., *Thwaites* (C.P. n. 888).—Distrib. Java.

Perennial. *Stem* as thick as packthread, decumbent branching and interlaced below; branches erect. *Leaves* linear-lanceolate, glabrous or laxly hairy; sheath glabrous or margin ciliate; ligule rounded. *Panicle* 1–1$\frac{1}{2}$ in., rachis and short suberect branches glabrous; gl. I–III pale brown; tip of IV naked or bearded.

51. **P. pilipes,** *Nees & Arn. ex Büse in Miq. Pl. Jungh.* iii. 376; tall, leaves 2–6 in., panicle contracted, branches short with often slender hairs on the pedicels, spikelets $\frac{1}{16}$ in. very shortly pedicelled glabrous, gl. I = about $\frac{1}{2}$ III obtuse 3-nerved, III 5-nerved. *Wight Cat.* n. 2343; *Miq. Fl. Ind. Bat.* iii. 453; *Trim. Cat. Ceyl. Pl.* 105. P. hermaphroditum, *Steud. Syn. Gram.* 67; *Benth. Fl. Austral.* vii. 485. P. oxyphyllum, *Hochst. ex Steud. l. c.* 65. ? P. carinatum, *Presl Rel. Haenk.* i. 309 (*ex Hack. in Engl. Bot. Jahrb.* vi. (1885) 235).—Panicum, *Wall. Cat.* n. 8743 B. D.

Sikkim Terai, *Clarke.* Khasia Hills, alt. 0–2500 ft., common. Burma, Central Provinces, Nilghiri Hills, alt. 4000 ft., the Malay Peninsula, Nicobar Islds. and Ceylon (C.P. 100, 709, 891).—Distrib. Tonkin, Malaya, Australia, Pacific Islds., Mascarene Islds. and Madagascar.

Perennial. *Stem* 1–2 ft., geniculately ascending from a slender creeping branching base, lower nodes rooting, upper subpubescent. *Leaves* $\frac{1}{3}$–1$\frac{1}{2}$ in. diam., glabrous or sparsely hairy above, puberulous beneath, finely acuminate, base narrow; sheath glabrous or ciliate, mouth hairy; ligule rounded. *Panicle* 3–5 in.; branches rather remote, erect or spreading with short fastigiate branchlets; spikelets brown; gl. IV white, its palea narrow, patent, hard.—The Madagascar and Seychelle Islds. *P. multinode,* Lamk, is very closely allied, if not the same, in which case that name takes priority. In Nicobar specimens the spikelets are sparsely pubescent. Thwaites regarded *pilipes* as a form of *P. trigonum.*

** *Pedicels capillary, much longer than the spikelets.*

52. **P. patens,** *Linn. Sp. Pl.* 86; stem creeping and rooting below, leaves ovate to linear-lanceolate glabrous or ciliated below with tubercle-based hairs, panicle contracted or effuse, rachis branches and pedicels capillary, gl. I = $\frac{1}{3}$–$\frac{2}{3}$ III ovate obtuse 3-nerved, II and III glabrous or with ciliate tips. *Burm. Fl. Ind.* t. 10, f. 2; *Spreng. Syst.* i. 322 (*excl. syn.* multinode); *Kunth Enum. Pl.* i. 126 (*excl. syn. Roxb.*). P. accrescens, *Trin. Sp. Gram. Ic.* t. 88, *& corrigend.* vol. iii.; *Kunth l. c.* 116. P. obliquum, *Roth Nov. Sp.* 51; *Kunth l. c.* 103; *Miq. Fl. Ind. Bat.* iii. 452. P. radicans, *Retz. Obs.* iv. 18; ? *Trin. Pan. Gen.* 218; *Nees Agrost. Bras.* 206; *Kunth l. c.* 216; *Wight Cat.* n. 2344. P. trigonum, *in part, Thw. Enum. Pl. Zeyl.* 359. P. velutinum, *Willd. Herb. ex Spreng. l. c.*—Panicum, *Wall. Cat.* n. 8738, 8740.

Throughout India, from the Lower Himalaya in Garwhal to Sikkim, and the Khasia Hills, ascending to 3000 ft., southward to the Malayan Peninsula and Ceylon.—Distrib. E. tropical Asia and the Malay and Pacific Islds.

Stem 1–3 ft., branched below, leafy; nodes glabrous. *Leaves* 2–6 by $\frac{1}{4}$–$\frac{1}{3}$ in., thin, finely acuminate; margins and mouth of sheath ciliate; ligule rounded. *Panicle* 2–5 in., usually inclined with spreading glabrous or puberulous branches naked below, and very long distant spreading branchlets. *Spikelets* $\frac{1}{16}$ in. long.—Very variable in the size of the whole plant and of its leaves and panicle. The smaller forms agree with the specimens of *P. patens* in the Linnean Herbarium, and are Wallich's n. 8740, and n. 8738 C.; the larger are *P. accrescens* of Trinius (referred by himself to *obliquum*, Roth.), and are Wallich's 8738 A. B. D. A small variety? with larger spikelets, nearly $\frac{1}{12}$ in. long, occurs in the Nilghiris (*Herb. Wight* n. 3047); at Goodavery Ghats, *Lawson*; and in Ceylon, at Newera Elia (C.P. n. 886).

53. **P. longipes**, *Wight et Arn. in Wight Cat.* n. 1638; tall, leaves 4–10 in., panicle 5–10 in. fastigiately supra-decompound, branches and long pedicels capillary, spikelets $\frac{1}{12}$ in. glabrous, gl. I nearly = III ovate acuminate 3-nerved, II and III acute. Aira capillaris, *Heyne in Herb. Rottler, & in Wall. Cat.*—Panicum, *Wall. Cat.* n. 8741.

NILGHIRI and PULNEY HILLS, *Heyne*, &c.; Karkun Ghat, alt. 2000 ft., *Lawson.*

Stem 2–3 ft. and upwards, as thick as a crow-quill, quite smooth, base decumbent. *Leaves* $\frac{1}{3}$–$\frac{2}{3}$ in. broad, finely acuminate, narrowed and sparsely hairy at the base, finely puberulous beneath; sheath nearly glabrous; ligule rounded. *Panicle* subfastigiately branched; branches simple sometimes naked below for an inch and more, then fastigiately branched. *Spikelets* pale brown; gl. II and III with sparingly ciliolate tips.—Distinguished from *P. patens* by the greater size, robuster habit, and much larger spikelets with acute glumes. What may be a small state of it was found at Golaghat, Seebsagur, by *Clarke*. Compare also the form of *P. patens* with larger spikelets.

54. **P. sparsicomum**, *Nees ex Steud. Syn. Gram.* 83; stem filiform diffusely branched, leaves 1–2½ in. softly pubescent, panicle effuse of few long capillary branches and branchlets, spikelets $\frac{1}{16}$ in. oblong glabrous, gl. I = ½ III faintly 3-nerved, II longest and III ovate-lanceolate acute 5-nerved, IV thin pale. *Wight Cat.* n. 1635 (*name*). Agrostis zeylanica? *Herb. Wight.*; *Klein ex Steud. l. c.* 83.

CEYLON; Cookle or Cocklaj, Jan. 23rd, 1796, *Heyne in Herb. Rottl.*

Stems 6–18 in., almost capillary, rooting at the nodes. *Leaves* $\frac{1}{6}$–$\frac{1}{4}$ in. broad, acuminate, hairy on both surfaces; sheaths and their mouths hairy. *Panicle* on a filiform peduncle, 3–4 in. long and broad. *Spikelets* few, distant; gl. IV not so strongly laterally compressed and gibbous as in its allies.—A very distinct species, I think, but not easily characterized.

Sect. IX. PSEUDECHINOLÆNA. (See p. 28.)

55. **P. uncinatum**, *Raddi Agrost. Bras.* 41; *Trin. Gram. Panic.* 174, *Sp. Gram. Ic.* t. 216; *Kunth Enum. Pl.* i. 172; *Steud. Syn. Gram.* 60; *Thw. Enum. Pl. Zeylan.* 359; *Trim. Cat. Ceyl. Pl.* 105. P. echinatum, *Willd. ex Doell in Mart. Fl. Bras.* ii. II, 193. P. glandulosum, *Nees ex Trin. Gram. Panic.* 174. P. heteranthum, *Link Enum. Hort. Berol.* i. 212. P. nemorosum β, *Trin. l. c.* 174. P. Trinii, *Mor. Syst. Verz. Zoll.* 102. Echinolæna polystachya, *H. B. & K. Nov. Gen. & Sp.* i. 119, t. 679; *Kunth l. c.* i. 172, *Suppl.* 127. Cenchrus lappaceus, *Herb. Heyne.* ? Lappago aliena, *Spreng. Neue Entdeck.* iii. 15.—Echinolæna, *Wall. Cat.* n. 8661.

EASTERN HIMALAYA; from Nepal to Sikkim, alt. 3–6000 ft. KHASIA, NAGA, and MUNNEPORE HILLS, alt. 2–5000 ft. SOUTH DECCAN, on the Shivagerry Hills, *Wight.* CEYLON, common.—DISTRIB. Trop. Asia and America.

Perennial. *Stem* decumbent, straggling and branched below; branches 4–18 in., leafy, slender. *Leaves* 2–4 in., ovate-lanceolate, membranous, flat, base narrow oblique; sheath ciliate; ligule oblong, scarious. *Panicle* 1–3 in.; branches 2–6, distant, spiciform, flexuous, scaberulous. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in., solitary or 2-nate, dimidiate-ovate; pedicels very short, uncinate, scabrid; gl. I oblong-lanceolate, acuminate, keeled, 3-nerved, tip scabrid; II gibbously cymbiform, acute, 7-nerved, pale dull red, hispid, hairs sometimes hooked; III broadly ovate, obtuse, 7-nerved, paleate, male, green, sides centre and obtuse tip broadly hyaline, lateral nerves approximate; IV cymbiform, shorter than III, laterally compressed, thinly coriaceous. *Lodicules* 0.

DOUBTFUL AND EXCLUDED SPECIES.

P. ABLUDENS, *Roem. & Schult. Syst.* ii. 457; *Roth Nov. Sp.* 53. P. ramosum, *Heyne mss. ex Roth l. c.* P. paradoxum, *Rottl. mss. ex Roem. & Sch. l. c.*, is evidently a *Paspalum.*

P. ACICULARE, *Desv. in Poir. Encycl. Suppl.* ii. 274; *Nees Agrost. Bras.* 235; *Kunth Enum. Pl.* i. 116; *Steud. Syn. Gram.* 82, is, I suspect, an American species, erroneously described as E. Indian. There is no Indian *Panicum* at all answering to it.

P. ANGUSTATUM, *Edgew. in Journ. Beng. As. Soc.* xxi. (1852) 157; *name only.*

P. ARANEOSUM, *Edgew.* in Index Kewensis, is an error for Pennisetun araneosum, *Edgew.* (= Penn. lanuginosum).

P. CONCINNUM, *Edgew. l. c.* 157, 179, 187; the description will apply to various species.

P. FESTUCOIDES, *Poir. Encycl. Suppl.* iv. 283; *Kunth Enum. Pl.* i. 131 is undeterminable.

P. FLEXUOSUM, *Retz. Obs.* iii. 9, and iv. 16; *Steud. Syn. Gram.* 83, described as an Indian Plant of Koenig's by Retz., is doubtfully referred to the Brasilian *Isachne ventricosa* by Doell in Mart. Fl. Bras. ii. II, 274. Retz describes it as being like *capillare,* Linn., but with the nodes bearded by reflexed hairs.

P. FUGAX, *Koen. in Naturf.* xxiii. (1788) 209; *Gmel. Syst.* 162; *Kunth l. c.* 134, is undeterminable.—Mr. Rendle informs me that this probably refers to a plant alluded to by Koenig in his correspondence (now in the British Museum) as "a decumbent *Panicum* growing in rice-fields, in which the panicle flowered almost before it had left the sheath, often a larva is found in the flower when the latter perishes otherwise it is caducous." A diseased Panicum (possibly *P. psilopodium*) bearing the name *P. insectiferum,* Koen. mss. in Herb. Mus. Brit. is presumably the plant.—I find diseased spikelets to be frequent in *P. psilopodium.*

P. HEYNII, *Roth Nov. Sp.* 49; *Kunth l. c.* 130; *Steud. l. c.* 80; branches of oblong panicle strict divided, base hairy, lowest whorled with fascicled flexuous scabrid branchlets, pedicels solitary alternate, gl. I cordate obtuse embracing the spikelet, leaves sharply serrate, margins and mouth of sheath hairy.

P. INFIDUM, *Steud. Syn. Gram.* 63, is probably a *Paspalum.*

P. KUNTHII, *Steud. Nom. Ed.* II, ii. 258. P. orthum, *Voigt Hort. Suburb. Calcutt.* 701; P. Pseudostricta, *Steud. Syn. Gram.* 39; Digitaria stricta, *Roth Nov. Sp.* 38; Setaria? stricta, *Kunth Revis. Gram.* i. 47, *Enum. Pl.* i. 157. I have failed to identify this plant. It is possibly a *Paspalum.*

P. REPENS, *Roxb. Ic. ined.* t. 111, 112, 796. Three plants of the section *Brachiaria* thus named are in Roxburgh's collection of drawings, none of them answering to his description of *repens* in Fl. Ind. (which I take to be *P. vestitum*), nor to the *P. repens,* Linn. All are represented as perfectly glabrous, with stem 12–18 in. high, creeping below; leaves flat, 4–5 in., strict, narrowed from a rounded base to the top; panicle 4–6 in.; spikes 10–20, 1–1$\frac{1}{2}$ in.; spikelets subsessile, about $\frac{1}{7}$ in., close set, sometimes obscurely paired, green; gl. I $\frac{1}{3}$–$\frac{1}{2}$ III, 5-nerved. In t. 111 the spikes are about 10, distichously spreading. In t. 112 there are about 20 distichously spreading spikes. In t. 796 there are 10, all secund. The grain of t. 111 is ovate-lanceolate, acuminate, with three dorsal lines; of t. 212 ovate-lanceolate, acuminate; of t. 796 elliptic-oblong, acute.—It is evident that in this as in other cases, Roxburgh had not named his Icones in accordance with the descriptions prepared for the "Flora Indica."

P. SERICEUM, *Soland. in Ait. Hort. Kew*, 88, is a West Indian plant erroneously entered as from "Ind. Or." by Steudel.

P. SIMPLICISSIMUM, *Koen. in Neue Schrift. Naturf.* xxiii. (1788) 209 (*ex Index Kewensis*). There is no such species described in the work cited, but Mr. Rendle has pointed out to me that at the bottom of the page Koenig mentions a very fine grass sent by him to Dr. Solander, adding, "Er hat eine Paniculam simplicissimam."

P. TENUE, *Roxb. Fl. Ind.* i. 310; stem 1–6 ft. erect, ramous, panicle thin, spikelets binate on a common hairy pedicel with unequal partial pedicels, gl. III paleate, grain ovate transversely waved.—Wild in the Circar Mts. (*Roxb.*).—*Stem* sometimes prostrate and rooting. *Leaves* large, upper surface hairy, margins with very sharp points; sheaths shorter than the internodes, hairy, mouths bearded. *Panicle* erect, till fruiting, then bowing as in *P. miliaceum*, of alternate compound nearly secund racemes; rachis 4–5-angled, branchlets 3-angled, flexuous hairy. *Spikelets* smooth, gls. many-nerved, III male in luxuriant plants.—I have altered Roxburgh's phraseology to bring it into harmony with that of this work. I have seen no plant answering to the above description except perhaps a small state of *P. maximum.*

P. TRACHYPUS, *Trin. Panic. Gen.* 170; rays subracemiform, shortly compound from the base alternate, raylets spreading, pedicels very short, spikelets lineal obovate submucronulate pubescent, gl. I 3–4 times shorter than the spikelet, 3-nerved, II 5-nerved, 4 mucronate rugose. Leaves glabrous lanceolate from a cordate base.—Nepal.

P. TRIFLORUM, *Edgew. in Journ. As. Soc. Beng.* xxi. (1853), 157, 179; *Duthie Grass. N.W. Ind.* 7, *Fodd. Grass. N. Ind.* 13; Edgeworth's description will apply to various species.

5. ICHNANTHUS, *Swartz.*

Annual or perennial branching grasses. *Leaves* broad. *Spikelets* 1–2-fld., long panicled, ovate or lanceolate, terete, articulate (but often persistent) on their pedicels. *Glumes* 4, I II and III subequal or II longest, strongly nerved; III paleate or not, male or neuter; IV much shortest, stipitate, paleate, bisexual, oblong or oblong-lanceolate, stipes with an anticous simple or 2-fid or 2 lateral appendages. *Lodicules* 2, minute. *Styles* free, exserted apically. *Stamens* 3. *Grain* coriaceous, acute or acuminate, polished, articulate at the base of the stipes.—Species about 20, tropical.

This genus differs from *Panicum* in the appendaged base of gl. IV.

1. **I. pallens,** *Munro in Benth. Fl. Hongk.* 414; stem slender elongate, leaves broadly lanceolate, panicle open, rachis and subsecund branches slender, gls. spreading, I ovate-lanceolate acuminate, III paleate neuter or male, IV when mature exposed, turned on one side, oblong obtuse, appendages 2 adnate to its sides. *Thw. Enum. Pl. Zeyl.* 361; *Trim. Cat. Ceyl. Pl.* 105. Panicum pallens, *Swartz Prodr.* 23, *Fl. Ind. Occ.* i. 164; *Kunth Enum. Pl.* i. 89; *Nees Agrost. Bras.* 137; *Trin. Sp. Gram. Ic.* t. 211; *Griseb. Fl. Brit. W. Ind.* 550. P. vicinum, *Baily Syn. Queensland Fl.* iii. 82. Apluda Zeygites, *Aubl. Pl. Guian.* ii. 933 (*excl. Syn.*). ?Agrostis nutans, *Poir. Encycl. Suppl.* i. 255.

SIKKIM HIMALAYA; ascending to 3500 ft. KHASIA HILLS, alt. 1–4000 ft., ASSAM, and BENGAL.—CEYLON, alt. 4000 ft.—DISTRIB. Tropics generally.

Stem 1–2 ft., weak, decumbent; loosely branched, more or less pubescent. *Leaves* 3–6 by ½–1 in., broadly-lanceolate, thin, flat, caudate-acuminate, scaberulous; base rounded or cordate, ciliate; sheath lax; ligule a few hairs. *Panicle* 3–4 in., unilateral; branches erect or spreading, and pedicels scaberulous. *Spikelets* ⅕ in. long, green; gl. I–III persistent, keels scabrid; I more than ½ III, ovate-lanceolate, subaristate, 3-nerved, II acuminate 5-nerved; III obtuse 5-nerved, palea large; IV = ½ III deciduous, smooth, pale, turned half round so that the long diam. is at right angles to the plane of the spikelets; appendages obscure.—The oblique position of the grain is very peculiar.

2. **I. foliolosus**, *Munro in Herb. Kew*; dwarf, hispidly hairy, fastigiately branched from the base, leaves short almost subulate, spikelets ⅙ in. in short panicles half immersed in the leafy tips of the short branches erect, gl. I nearly = III 5-nerved, II longer than III subaristate, III epaleate 5-nerved, IV ellipsoid acute, appendage minute anticous 2-lobed. Panicum foliolosum, *Wall. Cat.* n. 8680.

BURMA; Ava, *Wallich*; Mengoon, *J. Anderson.*

Densely tufted, 6–8 in. high, stiff, branches suberect or prostrate to the tips. *Leaves* 1–1¼ by ⅒–⅙ in., flat, strongly many-nerved, clothed like the short sheaths and panicles with spreading hairs; ligule of rigid hairs. *Panicles* with short erect angular branches. *Spikelets* green, tips scabrid; gl. IV much shorter than III, stipitate, base truncate.—A very peculiar species.

6. THYSANOLAENA, *Nees.*

A very large glabrous grass; stem solid. *Leaves* broad, flat. *Panicle* very large, effuse, with myriads of crowded long filiform compound suberect branches and branchlets bearing innumerable subsecund very minute 1-fld. spikelets which are jointed on very short pedicels. *Glumes* 4; I and II minute, concave, obtuse, awnless; I shortest nerveless; II nerveless; III much longer, epaleate, empty, coriaceous, acuminate, 1-nerved, hardening; IV rather shorter membranous, oblong, acute, clothed with white erect hairs, palea short, truncate. *Stamens* 2–3, anthers short. *Styles* free. *Grain* most minute, free within the hardened glumes.

T. Agrostis, *Nees in Edinb. new Phil. Journ.* xviii (1835) 180; *Steud. Syn. Gram.* 119. T. maxima, *Herb. O. Kuntze.* T. acarifera, *Arn. & Nees in Nov. Act. Nat. Cur.* xix. *Suppl.* i. (1843) 181; *Wall. Cat.* n. 8882; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1890) 347; *Duthie Grass. N.W. Ind.* 13, *Fodd. Grass. N. Ind.* 21. Panicum acariferum, *Trin. Sp. Gram. Ic.* t. 87; *Baker Fl. Maurit.* 437; *Miq. Fl. Ind. Bat.* iii. 517. P. Amlisa, *Herb. Ham. ex Wall. l. c.* C. Myriachaeta arundinacea, *Zoll. & Mor. Syst. Verz. Zoll.* 101; *Steud. Syn. Gram.* 404. M. glauca, *Mor. ex Steud. l. c.* 404; *Zoll. Syst. l. c.* Melica latifolia, *Roxb. Fl. Ind.* i. 328. Agrostis maxima, *Roxb. l. c.* 317. A. latifolia, *Heyne in Herb. Rottl.* (*non Trevir.*). A. scoparia, *Koenig ex Herb. Rottl.* (*non Steud.*). Arundo montana, *Herb. Ham. ex Wall. l. c.* B.

SUBTROPICAL HIMALAYA, from Kumaon eastwards and the KHASIA HILLS, alt. 4-5000 ft. BEHAR; on Parus-nath. The DECCAN, BURMA; NICOBAR ISLES., and PENANG.—DISTRIB. Eastw. to New Guinea.

Stem 4-12 ft., sometimes as thick as the little finger. *Leaves* 1–2 ft. by 2–4 in., coriaceous, tapering to a fine point, base cordate; mouth of sheaths hairy; ligule short, ciliate. *Panicle* 1–2 ft., soft, quite glabrous. *Spikelets* $\frac{1}{20}$ in., pale yellow, rather shining, very obscurely jointed on the pedicels which are jointed on the branches.—*Myriachaeta glauca,* Mor., was founded on the erroneous supposition that its gl. IV was hairless. The spikelets are sometimes viviparous.

7. CHAMAERAPHIS, *Br.*

Glabrous marsh or aquatic grasses. *Leaves* linear or lanceolate. *Spikelets* 1–2-fld., subsessile and subsecund on the branches of a simple panicle which are produced in an awn-like bristle beyond the terminal spikelet, obscurely articulate on their pedicels, narrowly lanceolate. *Glumes* 4, I very small, truncate, hyaline, nerveless; II longest, acuminate or narrowed into rigid awn, 5-many-nerved; III lanceolate acute or aristately acuminate paleate male or neuter; IV very small, oblong, hyaline, fem. or bisexual; palea hyaline. *Lodicules* of male fl. cuneiform. *Stamens* 3. *Styles* free. *Grain* linear-oblong, compressed, free within the gl.—Species 5–6, trop. As. and Austral.

Besides the spikelets on the branches of the panicle, there are often one or more on the peduncle below the panicle, which are appressed, and sometimes somewhat sunk in a groove of the peduncle. The species are very variable.

1. **C. spinescens,** *Poir Encycl.* ii. 189; stems elongate rather stout, panicle pyramidal or contracted, branches with one few or many spikelets each $\frac{1}{6}$–$\frac{1}{4}$ in., glume III aristately acuminate many-nerved, IV obtuse. *Benth. Fl. Austral.* vii. 499; *Trim. Cat. Ceyl. Pl.* 106. C. aspera, *Nees in Wall. Cat.* n. 8679; *Wight Cat.* n. 1655; C. paradoxa, *Poir. l. c., Kunth Enum. Pl.* i. 148, *Suppl.* 105. C. spinosa, *Beauv. ex Schult. Mant.* ii. 253. Panicum asperum, *Koen. in Naturf.* xxiii. (1788) 209; *Wight ex Steud. Syn. Gram.* 49; *Thwaites Enum. Pl. Zeyl.* 436. P. spinescens, *Br. Prodr.* 193; *Kunth Enum. Pl.* i. 131. P. ischæmoides, *Heyne ex Wall. l. c.* P. squarrosum, *Lam. Encycl.* iv. 743; *Kunth Enum. Pl.* i. 131. Andropogon squarrosus, *Linn. Herb.* Echinochloe squarrosa, *Roem. & Sch. Syst.* ii. 479. Orthopogon squarrosus, *Spreng. Syst.* i. 307. Setaria longiflora, *Desv. Opusc.* 81.

MARWAR; on Mt. Aboo, *King.* BANDA, *Duthie.* LOWER BENGAL, *Roxburgh, Griffith,* &c. SOUTH DECCAN PENINSULA, *Heyne, Wight,* &c. CEYLON, *Ferguson Glennie.*—DISTRIB. China, Malaya, Australia.

Floating in much branched masses, with leafy stems 1–3 ft., and panicles 2–4 in. long, varying very much in the number and size of their spikelets. *Leaves* 1–3 in., and their somewhat inflated sheaths smooth or scaberulous. *Spikelets* $\frac{1}{6}$–$\frac{1}{4}$ in. long.

Var. *Brunoniana;* spikelets one or two on the branches of the panicle $\frac{1}{4}$–$\frac{1}{2}$ in. long. Panicum Brunonianum, *Griff. Ic. Pl. Asiat.* t. 145 and 139, f. 107. P. (Chamaeraphis) intermedium, and Pseudoraphis Brunoniana, *Griff. Notul.* iv. 29. Holcus natans, *Herb. Roxb.*—Lower Bengal, *Roxburgh, Griffith.*—Tonkin, Australia.

Var. *depauperata;* slender, leaves very short, panicle short contracted, spikelets $\frac{1}{6}$ in. C. depauperata, *Nees in Wight Cat.* n. 1654; *Steud. Syn. Gram.* 49; *Trim. Cat. Ceyl. Pl.* 106. Panicum sordidum, *Thw. Enum. Pl. Zeyl.* 443.—Jheels of Bengal, the Deccan and Ceylon.

2. **C. gracilis,** *Hack. in Engl. Bot. Jahrb.* vi. 326; branches of panicle many simple with many minute spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. long.

LOWER BENGAL; *Clarke.* CACHAR, *Keenan.* BURMA, *Kurz.*—DISTRIB. Tonkin.

Stems 6–8 in., decumbent and rooting at the nodes, geniculately ascending, branches slender; internodes 1–2 in. *Leaves* 1–1½ by ⅙–⅕ in., spreading, strict, linear, acute, striate, base rounded, glabrous or sparsely hairy; sheaths broad, loose, membranous, compressed, 2-auricled, glabrous; ligule short, hyaline, toothed. *Panicle* shortly exserted beyond the upper sheath, 1–2 in. long, rachis and erecto-patent subsimple branches capillary, smooth. *Spikelets* very shortly pedicelled, green or brownish; gl. I truncate; II straight, sometimes long-acuminate or almost beaked, glabrous or obscurely sparsely hairy, nerves close, strong; III ⅓–½ shorter than II, subacute; IV about ½ III.—Very near the Australian *C. abortiva*, Poir. (*C. spinescens* var. *parvispicula*, Benth.) which has a lax panicle with few branches and spikelets.

8. SPINIFEX, *Linn.*

Stout, rigid, bushy, polygamo-diœcious grasses. *Leaves* long, rigid, involute. MALE SPIKELETS 2-fld., subsessile, articulate on rigid peduncled spikes, which are collected in umbels surrounded by spathaceous leafy bracts; glumes 4, membranous, not awned; I and II empty; III and IV paleate, triandrous. FEM. SPIKELETS collected in large globose heads of stellately spreading very long rigid rod-like rachides, surrounded by shorter subulate bracts; each spikelet solitary, and articulate at the very base of a rachis, lanceolate, 2-fid. *Glumes* I, II, III, as in the male, but larger; III paleate, empty or triandrous; IV fem. *Lodicules* 2, large, nerved. *Styles* long, free; stigmas shortly feathery. *Grain* free within the hardened glumes.—Species 4; an Indian and 3 Australasian.

S. squarrosus, *Linn. Mant.* ii. 300; glabrous, glaucous, leaves pungent, male spikes 2–3 in., spikelets distant, fem. spikelets concealed by the bracts. *Lamk. Illust.* t. 840; *Kunth Enum. Pl.* i. 175; *Wall. Cat.* n. 8631; *Steud. Syn. Gram.* 113; *Thw. Enum. Pl. Zeyl.* 362; *Trim. Cat. Ceyl. Pl.* 106; *Elliott Fl. Adrh.* 163; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1890) 339; *Duthie Grass. N.W. Ind.* 11; *Benth. Fl. Hongk.* 415; *Miq. Fl. Ind. Bat.* iii. 474. S. dioicus, *Ham. ex Pritz. Icon. Index*, 1058. Stipa littorea, *Burm. f. Fl. Ind.* 29. S. spinifex, *Linn. Mant.* i. 84. —*Rheede Hort. Mal.* xii. t. 75.

Sandy coasts of both PENINSULAS, BURMA, and CEYLON.—DISTRIB. Java, China.

A squarrose gregarious bush, several feet high and broad. *Leaves* 4–6 in.; sheaths often imbricating; ligule very short, hirsute. *Peduncles* of male 2–3 in.; scaberulous, tips naked, pungent. *Male spikelets* ⅓–½ in.; gls. thin, all glabrous, I and II subequal, oblong-lanceolate, acuminate, 7–9-nerved, nerves scaberulous; III rather longer, 5-nerved, paleate; IV shorter, ovate-lanceolate, acuminate, 5-nerved; paleas of III. and IV. narrowly lanceolate, keels ciliate. *Fem. spikelets* ⅔ in., narrowly lanceolate; gls. all glabrous, I oblong-lanceolate, acuminate, many-nerved, nerves scaberulous; II rather shorter, acute, 7-nerved; III like II, 5-nerved; IV ovate-lanceolate, abruptly narrowed above the middle and acuminate, 5-nerved; palea shorter but broader than the gl., acute, 2-nerved, keels smooth, style very long, branches slender.

9. AXONOPUS, *Beauv.*

Perennial grasses. *Spikelets* 2-fld., articulate with the pedicel, sessile or subsessile in whorled or digitate spikes, awned. *Glumes* 4, I shortest, ovate, acuminate or cuspidate, glabrous, 3-nerved; II ovate-lanceolate, acuminate or awned, 5-nerved, lateral nerves marginal villous; III oblong, acute, 5-nerved, paleate, male, palea very short 2-fid or 2-partite; IV = II, oblong or ovate, coriaceous, narrowed into a straight subulate awn; palea oblong, coriaceous, 2-nerved. *Lodicules* cuneate. *Stamens* 3, anthers long. *Styles* distinct. *Grain* small, suborbicular, free within the glumes.

A natural genus, remarkable for the small cleft palea of gl. III. It was established by Beauvois on *Panicum cimicinum*, Retz, to which other grasses having no affinity with it were added. Kunth erred in taking up Beauvois *Urochloa* (which is *Panicum javanicum*, Poir) and placing *A. cimicinum* in it.

1. **A. cimicinus,** *Beauv. Agrost.* 12; leaves ovate or ovate-lanceolate, spikes subverticillate. Panicum cimicinum, *Retz. Obs.* iii. 9; *Rottl. in Neue Schrift. Ges. Naturf. Freund.* iv. (1803) 191, 194; *Roxb. Fl. Ind.* i. 295; *Thw. Enum. Pl. Zeyl.* 358; *Trim. Cat. Ceyl. Pl.* 104. P. conjugatum, *Dalz. & Gibs. Bomb. Fl.* 291. Urochloa cimicina, *Kunth Revis. Gram.* i. 31, ii. 56, t. 103, *Enum. Pl.* i. 74, *Suppl.* 56; *Dalz. & Gibs. Bomb. Fl.* 289. Coridochloa cimicina, *Nees in Edinb. N. Phil. Journ.* xv. (1833) 381. C. fimbriata, *Nees ex Wight Cat.* 1656; *Wall. Cat.* n. 8749; *Aitchis. Cat. Panjab Pl.* 158. Milium cimicinum, *Linn. Mant.* 184.

Throughout INDIA, in the plains and lower hills, BURMA, PENANG and CEYLON. —DISTRIB. Malaya, China.

Stem 1–2 ft., tufted, stout or slender, erect, or decumbent and geniculate at the base, and leaves hirsute with long spreading white hairs, rarely glabrescent. *Leaves* 1–3 by ½–1 in., acute or obtuse, flat, green, striate, ciliate, base deeply cordate, ligule obsolete. *Spikes* 3–8 in a whorl, 1–6 in. long; rachis filiform, simple or divided, scaberulous; flowerless below. *Spikelets* ⅛–⅙ in. long, solitary or clustered, very shortly pedicelled, dorsally compressed, pale, rather shining; gl. I acuminate; II mucronate or shortly awned; III acute; IV with a setiform awn.

2. **A. semi-alatus,** *Hook. f.*; leaves long linear, spikes few subdigitate. Panicum semi-alatum, *Br. Prodr.* i. 192; *Benth. Fl. Austral.* vii. 472; *Thw. Enum. Pl. Zeyl.* 358; *Trim. Cat. Ceyl. Pl.* 104. P. viaticum, *Griff. Ic. Pl. Asiat.* t. 145, f. 2. Bluffia Eckloniana, *Nees in Lindl. Introd. Nat. Syst. Ed.* II 447. Coridochloa semi-alata, *Nees in Edinb. New Phil. Journ.* xv. (1833) 381. Urochloa semi-alata, *Kunth Revis. Gram.* i. 311, *Enum. Pl.* i. 74. Oplismenus semi-alatus, *Desv. Opusc.* 81. Arundinella Schultzii, *Benth. l. c.* 545. Aira viatica, *Griff. Notul.* iii. 54. Holosetum philippinense, *Steud. l. c.*—Coridochloa, *Wall. Cat.* n. 8758.

SUBTROPICAL HIMALAYA, alt. 4–6500 ft., from Kumaon to Sikkim. The KHASIA HILLS, alt. 4–5000 ft.; MUNNEPORE; BURMA, *Collet*; BEHAR on Parusnath 3–5000 ft. CEYLON up to 5000 ft.—DISTRIB. Mauritius, S. Africa, China, Philippines, Australia.

Stems 1–3 ft., densely tufted, bases thickly clothed with the woolly remains of old leaf-sheaths. *Leaves* 8–12 by ⅙–¼ in., glabrous or pubescent, finely acuminate; ligule obscure. *Spikes* 2–5, 3–6 in. long; rachis slender subflexuous, smooth or hairy. *Spikelets* ¼ in., pale or brown, solitary or in distant pairs, sessile or pedicelled.

10. **TRICHOLÆNA,** *Schrad.*

Erect, tufted, annual or perennial grasses. *Leaves* narrow. *Spikelets* 1–2 fld., articulate on their pedicels, panicled, laterally compressed, clothed with long silky hairs, callus stipitiform. *Glumes* 3 or 4, I if present very small, often inserted much below III; II and III subequal, membranous, broadly ovate, mucronate or awned, dorsally rounded; III paleate, triandrous; IV very thin, shining, fem. or bisexual. *Lodicules* 2, minute, dolabriform. *Grain* loose within the gls.—Species many, chiefly S. African.

A genus the characters of which cannot be satisfactorily determined till a great many indetermined species are examined. It differs from *Panicum* in the villous or silky awned spikelets with membranous glumes. The two Indian species differ remarkably in the form of gl. IV.

1. **T. Teneriffæ,** *Parlat. in Webb & Berth. Phyt. Canar.* iii. 425, *Fl. Ital.* i. 130; perennial, gl. I minute or obsolete, IV sessile ovate-lanceolate acuminate margins incurved. T. micrantha, *Schrad. in Sch. Mant.* ii. 163; *Nees in Ann. Sc. Nat. Ser.* II vi. (1836) 106. Panicum plumosum, *Presl Fl. Sic.* i. 43. P. saccharoides, *Trin. Gram. Panic.* 245. P. Teneriffæ, *Br. Prodr.* 189; *Kunth Enum. Pl.* i. 98, *Suppl.* 75. P. villosum, *Presl Gram. & Cyp. Sic.* 18. Saccharum Teneriffæ, *Linn. f. Suppl.* 106; *Jacq. f. Eclog. Gram.* 51, t. 34 (*excl. Syn.*); *Biv. Bern. Stirp. Sic. Rar.* iv. 5, t. 1. *Sibth. Fl. Græc.* i. t. 53 (*excl. Anal.*). Agrostis plumosa, *Ten. Fl. Nap. Prodr. Suppl.* i. 59.

Western Panjab, *Falconer;* alt. 3500 ft., *Stewart.* SCIND, *Stocks.*—DISTRIB. Westward to Sicily and N. Africa.

Stems many from a woody stock, geniculate below, slender, rigid. *Leaves* very slender, convolute, rigid, glabrous; mouth of sheath bearded; ligule, a narrow membrane. *Panicle* 2–4 in. rather open, branchlets and pedicels capillary. *Spikelets* $\frac{1}{10}$–$\frac{1}{8}$ in., white or purplish, silky with spreading hairs; gls. II and III ovate acute or mucronate, concave; IV articulate at the base, white or brown, shining.

2. **T. Wightii,** *Nees & Arn. ex Steud. Syn. Gram.* 93; annual, gl. I very small linear, IV ellipsoid obtuse convolute. *Nees in Wight Cat.* n. 2345; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1890) 347. T. micrantha, *Schrad. in Sch. Mant.* ii. 163; *Schmidt Beitr. Fl. Cap. Verd.* 153. T. tuberculosa, *Hack. mss.* Rhynchelytrum Wightii, *Duthie Fodd. Grass. N. Ind.* 21. Panicum megalanthum, *Steud. Syn. Gram.* 93. Saccharum Teneriffæ, *Parl. in Hook. Niger Flora,* 183 (*excl. Syn.*). Aira chinensis, *Retz. Obs.* iii. 10.—Tricholæna, *Wall. Cat.* n. 8660.

RAJPOOTANA; Ajmeer and Oodeypore, *Duthie.* The DECCAN, *Heyne, Wight.*—DISTRIB. Arabia, Cape Verd Islds.

Stems 6–18 in., tufted, stout or slender. *Leaves* 1–3 in., linear, acuminate, flat, and sheaths glabrous or hairy; ligule obsolete. *Panicle* 2–4 in., very narrow; branches and pedicels capillary, flexuous. *Spikelets* very variable in size, $\frac{1}{6}$–$\frac{1}{3}$ in. long; stipitiform callus gibbous, bearded; gl. I $\frac{1}{12}$–$\frac{1}{10}$ in. linear-oblong, obtuse, concave spreading; II and III tumid below, subrostrate, awned below the acute or obtuse tip, nerves smooth or tubercled; awn very slender, not twisted, longer than the gl. or shorter, palea of III narrow, keels ciliate; IV very thin, margins often overlapping.—The great variability in the size of the spikelets is very deceptive. It is not known where in the Deccan Heyne's and Wight's specimens were collected.

11. **OPLISMENUS,** *Beauv.*

Weak grasses; stems decumbent below, leafy. *Leaves* thin, flat, ovate to lanceolate; ligule a ridge of hairs. *Spikelets* 1-fld., sessile or subsessile, fascicled on a simple terminal spike or on panicled spikes. *Glumes* 4, I short, 3-nerved, long-awned, awn straight; II short, awn short or 0; III longest, 5-nerved, paleate or not, empty; IV lanceolate, terete and with its palea hardened. *Stamens* 3, anthers linear. *Styles* distinct. *Grain* free within the glumes.—Species few, very variable.

Of the 30 or more reputed species of *Oplismenus, Burmannii* and *compositus* seem to be the most distinct, for *undulatifolius*, though constant over wide areas, is only a form of *compositus* with the branches of the panicle represented by one or a few sessile or subsessile spikelets.

1. **O. undulatifolius**, *Beauv. Agrost.* 54; spikelets solitary or clustered in a simple terminal spike. *Kunth Revis. Gram.* i. 44, *Enum. Pl.* i. 139, *Suppl.* 101; *Parlat. Fl. Ital.* i. 123; *Boiss. Fl. Orient.* v. 442; *Franch. & Sav. Fl. Japon.* ii. 654; *T. Nees Gen. Fl. Germ. Monoc.* i. n. 28; *Duthie Grass. N.W. Ind.* 8. O. acuminatus, *Nees ex Steud. Syn. Gram.* 45. O. æmulans, flaccidus & imbecillis, *Roem. & Sch. Syst.* ii. 487. O. æmulus, *Kunth Revis.* i. 44. O. latifolius (*error for* undulatifolius) *Herb. Strach. & Winterb.*; *Aitchis. Cat. Panjab Pl.* 161; *Duthie l. c.* 8. O. parvifolius, *Kunth* 45. O. setarius, *Roem. & Sch. l. c.* Orthopogon gonyrrhizus, *Miq. Fl. Ind. Bat.* iii. 443; Orth. hirtellus, æmulus & flaccidus, *Br. Prodr.* 194. Orth. setarius, *Spreng. Syst. Veg.* 306; *Griseb. Fl. Brit. W. Ind.* 545. Orth. undulatifolius, *Spreng. Syst.* i. 306; *Reichb. Fl. Germ. Excurs.* i. 23, *Ic. Fl. Germ.* i. t. 28. Orth. undulatus, *Link Hort. Reg. Berol.* i. 203. Panicum barbifultum, *Hochst. Pl. Hohenack.* n. 1279, *ex Schlecht. in Linnæa*, xxxi. 307. P. Burmanni, *Schrenk Pl. Exsicc. Cent.* iii. n. 68; *Balb. Misc. Bot.* i. 8. P. gonyrrhizum, *Steud. l. c.* 44. P. hirtellum, *All. Fl. Pedem.* ii. 240. P. imbecille, *Trin. l. c.* t. 191; *Wulf. in Jacq. Collect.* i. 263; *Schrad. Fl. Germ.* i. 242. P. setarium, *Lamk. Ill.* i. 170; *Poir. Encycl.* iv. 741; *Pers. Syn.* i. 82. P. undulatifolium, *Arduin. Sp. Alt.* 14, t. 4; *Gaud. Agrost. Helvet.* i. 28; *Trin. Sp. Gram. Ic.* t. 192; *Koch Syn. Fl. Germ. Ed.* ii. 892. ? Setaria hirtella, *Schult. Mant.* ii. 276.

TEMPERATE HIMALAYA, alt. 6–9000 ft., from Kashmir to Sikkim. KHASIA HILLS, alt. 4-5000 ft., NILGHIRI HILLS.—DISTRIB. Central and S. Europe, warm regions generally.

Stem 1–2 ft., usually very slender, simple or branched below. *Leaves* 1½–6 by ½–1 in., from ovate to narrow lanceolate, finely acuminate, glabrous or sparsely hairy; sheaths glabrous or hirsute. *Spike* 2–5 in.; rachis glabrous or pilose with spreading hairs; lower clusters of spikelets rarely produced into a very short spike. *Spikelets* ⅛–⅕ in. (excl. awns), solitary with a second reduced to an awn, or clustered, glabrous or nearly so. *Gl.* I 3-nerved, ciliate; awn ⅔ in. or less; II usually awned, 5-nerved; III acute or shortly awned, 7-nerved, palea narrow or 0.—Though as observed under the genus, this grass is only a form of *compositus*, it keeps its characters of the inflorescence throughout its distribution, and may hence be regarded as distinct. The Nilghiri form (*acuminatus*, Nees) has very narrow leaves, 3–4 by ⅓–½ in. It is remarkable that no specimen of this species should exist in the Wallichian Herbarium.

2. **O. compositus**, *Beauv. Agrost.* 54; stem usually tall from a decumbent base, leaves 2–7 in. lanceolate, spikes 4–10 1–6 in. long or more, spikelets usually loosely imbricate, awns rather stout pale or dark. *Kunth Enum. Pl.* i. 141; *Trin. Sp. Gram. Ic.* t. 188, 189, 190; *Benth. Fl. Austral.* vii. 491; *Trim. Cat. Ceyl. Pl.* 105; *Aitchis. Cat. Punjab. Pl.* 161; *Duthie Grass. N.W. Ind.* 81. O. brasiliensis, *Raddi Agrost. Bras.* 40. O. bromoides, *Baker in Journ. Linn. Soc.* xxi. (1885) 452. O. Burmanni, *Thw. Enum.* 358; *Hochst. Pl. Hohen.* n. 368 (*non Beauv.*). O. decompositus, *Nees in Endl. Prodr. Fl. Norfolk.* 19. O. elatior & loliaceus, *Beauv. l. c.*; *Kunth l. c.* 142. O. hirtellus, *Roem. & Sch. Syst.* ii. 481. O. indicus, *Willd. in Act. Acad. Nat. Cur.* iv. 224. O. Jacquini, *Kunth Revis. Gram.* i. 44, 45, *Enum.* i. 140, 146. O. lanceolatus, *Kunth ll. cc.* 45. 146; *Wall. Cat.* n. 8676; *Dalz. & Gibs. Bomb. Fl.* 292. O. latifolius, *Hænke ex Steud. Nom.*

Ed. II ii. 220. O. pratensis, *Schult. Mant.* ii. 597. O. sylvaticus, *Roem. & Sch. l. c.* 481; *Kunth Revis.* i. 44, *Enum.* i. 139, *Suppl.* 101. Orthopogon compositus, *Br. Prodr.* 194; *Miq. Fl. Ind. Bat.* iii. Orth. Junghuhnii, *Nees ex Miq. l.c.* 444. Orth. longeracemosus & sylvaticus, *Miq. l. c.* Orth. pratensis, & loliaceus, *Spreng. Syst.* i. 306. Orth. remotus, *Trin. Fund. Agrost.* 181. Panicum aristatum, *Retz. Obs.* v. 17. P. bidentatum & certificandum, *Steud. l. c.* 44, 45. P. compositum, *Linn. Sp. Pl.* 57; *Trin. Sp. Gram. Ic.* t. 187; *Steud. l. c.* 44; *Thw. Enum. Pl. Zeyl.* 379; *Benth. Fl. Hongk.* 411; *Baker Fl. Maurit.* 439. P. composito-proximum, *Rottl. Ges. Naturf. Fr. Neue Schrift.* iv. (1804) 224. P. elatius, *Linn. f. Suppl.* 107. P. lanceolatum, *Retz. Obs.* v. 17; *Roxb. Fl. Ind.* i. 294; *Steud. l. c.* 48. P. longeracemosum, *Steud. l.c.* 45. P. peninsulanum, *Steud. l. c.* 44. P. sylvaticum, *Lamk. Encycl.* iv. 733; *Trin. Sp. Gram. Ic.* t. 190 A.; *Steud. l.c.* 45. P. undatum, *Steud. Nom. Ed.* II. ii. 264. P. unguinosum, *Herb. Banks ex Roxb. Fl. Ind.* i. 294. Echinochloa lanceolata, *Roem. & Sch. l. c.* 476. ?E. hirta, *Schult. Mant.* ii. 270. Hekaterosachne elatior, *Steud. l. c.* 118. Digitaria composita, *Willd. Enum. Berol.* i. 91. Andropogon undatus, *Jacq. Coll.* iii. 237, t. 631.—Orthopogon sp. *Griff. Notul.* iii. 43.

Throughout INDIA, from Kashmir to Upper Assam, Munnepore, and Burma (up to 8000 ft. in Sikkim) and southward to the Andaman and Nicobar Islds., Penang and CEYLON.—DISTRIB. most trop. regions (except Australia).

Stem 1–3 ft., stout or slender, branched from the base and sometimes upwards. *Leaves* very variable, 1½–1¼ in. broad; sheaths glabrous, pilose or hirsute. *Racemes* 2–6 in., stout or slender; rachis glabrous, pilose or hispid; spikes ½–3 in. long, erect or spreading, green or purplish. *Spikelets* ⅙–⅛ in. (excl. awns) solitary or in rather distant pairs or fascicles, appressed to the rachis or spreading, glabrous or with few or many bristles longer than the glumes at the base, rarely softly hairy; gls. pale green or reddish purple, I short, 3-nerved, ciliate, awn ¼ in. to nearly ¾ in., slender flexuous, pale yellowish or dark stouter and stiff; II longer or shorter than I, 5–7-nerved, acute, awn much shorter than of I or 0; III longer and broader than II; III acute or obtuse, 7–9-nerved, tip hispid, palea narrow or 0; IV lanceolate, terete, acuminate, and its hardened palea yellowish shining.—I am unable to group the Indian form of this most variable grass under practicable varieties. The following are indications of prevalent states, of which 6 is very aberrant.

1. Tall, stout, leaves 4–6 in., sheaths glabrous or hirsute, spikes and stout rachis of panicle more or less hirsute with long cilia, stout dark purplish awns often black. *Wall. Cat.* 8676 D. G. A. (*left-hand specimen*). Pan. elatius, *Heyne &* P. decompositus, *Nees, in Herb. Wight* n. 222, 1651. Andropogon undatus, *Jacq.*—Sikkim, Assam, Silhet, Burma and the Deccan.

2. Dwarf, branches short stout decumbent, leaves ¾–1 in. ovate green or purplish, sheaths hirsute, panicle erect, spikes erect stout glabrous or pubescent, and spikelets green or purple, awns short ⅙–¼ in. stout.—Oudh forests, Assam, Chittagong.

3. Slender, leaves 2–3 in., ovate-lanceolate, sheaths hirsute, panicle long very slender drooping rachis and very slender spikes finely pubescent, spikelets distant subsilky, awns very slender.—Sikkim alt. 1–3000 ft. Munnepore 4750 ft.

4. Tall, stout and much branched, or slender, leaves 4–7 in. lanceolate, sheaths glabrous, spikes many long stout or slender erect or drooping, rarely dark-colrd., spikelets rather distant very many glabrous or sparingly setose at the base, awn stout or slender. O. lanceolatus, *Kunth, Wall. Cat.* 8676 A. B. C. H. L. O. compositus, *Kunth*, &c.—The commonest form.

5. Same as 4, but always slender, with glabrous sheaths and rachis of panicle, fewer very slender smooth spikes, with few distant quite glabrous spikelets, awns slender pale. O. indicus, *Wight Herb.* n. 63, 1652 and lanceolatus, n. 2332. O. lanceolatus, *Wall. Cat.* 8676 E. F. M.—A reduced form of 4, and quite as common.

6. Slender, diffusely branched below; spikes few, distant, very slender; spikelets few, silkily villous, pale green, gl. I 3–5-nerved; II 5–7-nerved; III 7–9-nerved, its palea narrow tip ciliate.—Of this there are three forms or varieties, *a*, stem 2 ft., rather stout, leaves 3–4 in. linear-lanceolate, spikes 2–3 in., awns ⅓ in.—Penang, *Curtis*, n. 1102.—*b*, Very slender, leaves 1–1½ in., awns shorter. O. indicus, *Wight Cat.* n. 1652.—Ceylon, *Thwaites* (CP. 3963)—*c*. very slender, leaves ¾–1 in., spikes 2–3, short, gl. I as long as its awn.—Ceylon, *Thwaites* (CP. 3964).

3. **O. Burmannii,** *Beauv. Agrost.* 54; decumbent, flaccid, leaves ½–1 in., spikes 3–5 short, spikelets secund closely imbricate awns pale capillary. *Roem. & Sch. Syst.* ii. 484. *Kunth Revis. Gram.* i. 44, *Enum.* i. 139, *Suppl.* 101; *Trin. Sp. Gram. Ic.* t. 193; *Dalz. & Gibs. Bomb. Fl.* 291; *N.E. Br. in Gard. Chron.* (1886) ii. 776; *Franch. & Sav. Enum. Pl. Jap.* ii. 160; *Wight Cat.* n. 1650; *Duthie Grass. N.W. Ind.* 8, *Indig. Fodd. Grass.* t. 47, *Fodd. Grass. N. Ind.* 13. O. africanus, *Beauv. Fl. Owar.* ii. 15, t. 68, f. 1; *Kunth Enum.* i. 141. O. albus, *Roem. & Sch. Syst.* ii. 890. O. brasiliensis, *Raddi Agrost. Bras.* 400. O. bromoides, *Beauv. Agrost.* 54; *Bojer Hort. Maurit.* 366. O. Humboldtianus, *Nees Agrost Bras.* 264; *Presl Rel. Hænk.* i. 322. ?O. indicus, *Roem. & Sch. l. c.* 484; *Duthie Grass. N.W. Ind.* 8. Orthopogon Burmanni, *Br. Prodr.* 194; *Miq. Fl. Ind. Bat.* iii. 442; *Reichb. Ic. Fl. Germ.* i. t. 28. Orth. albus, *Nees ex Steud. l. c.* 44; *Miq. l. c.* Panicum Burmanni, *Retz. Obs.* iii. 10; *Roxb. Fl. Ind.* i. 298; *Trin. Sp. Gram. Ic.* t. 193; *Baker Fl. Maurit.* 438. P. album & africanum, *Poir. Encycl. Suppl.* iv. 274, 275. P. bromoides, *Lamk. Ill.* i. 170, *Encycl.* iv. 742. P. hirtellum, *Burm. Fl. Ind.* 24, t. 13, f. 1 (*non Linn*); *Steud. l. c.* 44. P. japonicum, *Steud. in Flora* xxix. (1846) 18. P. multisetum, *Hochst. Pl. Schimp. Abyss.* n. 1469; *A Rich. Tent. Fl. Abyss.* ii. 377. Echinochloa hirtella, *Schult. Mant.* ii. 269.—Oplismenus, *Wall. Cat.* 8677, 8678.

Plains of India, from Rohilkund to Bengal, Silhet and Chittagong, ascending the Himalaya in Sikkim to 5000 ft. Behar and Central India, Ceylon, Jaffna (Herb. Rottl.); *Ferguson*.—Distrib. Malay Islds., China, Japan, Afr. trop.

Diffusely branched and rooting below, stems often almost filiform. *Leaves* always small, sheaths glabrous or hairy. *Panicle* 1–4 in., inclined or nodding; spikes rarely 1 in., very pale, rachis glabrous or pubescent. *Spikelets* ⅒–⅛ in. (excl. awns); gl. I ciliate, 1–3-nerved, awn ⅓ in. or less; II 3–5-nerved, awned; III 5–9-nerved, shortly awned, palea 0.—Usually very distinct from *O. compositus*, but I have found specimens growing in the Jheels, with spikes nearly two inches long and stouter awns, forming a transition to that plant. Wall. Cat. 8678 is a very small Silhet form, with ovate leaves ¼–½ in. Clarke found it also in Silhet.—*O. africanus* is the earliest name for the species under *Oplismenus*, but *Burmannii* is of universal adoption, and is the earliest specific name; both were given by Beauvois, *O. africanus* in 1807, *O. Burmannii* in 1812.

DOUBTFUL SPECIES.

O ? dubius, *Kunth Revis. Gram.* i. 44; *Enum. Pl.* i. 143.

12. ARUNDINELLA, *Raddi.*

Annual or perennial erect grasses. *Leaves* narrow. *Spikelets* panicled, not jointed on the pedicels, 1–2-fld. *Glumes* 4, membranous or subcoriaceous, I ovate acute or acuminate, rather shorter than II, 3 or 5-nerved; II lanceolate or ovate-lanceolate, acuminate or subaristate, 5-rarely 7-nerved;

III equalling I or rather longer, oblong, subacute or narrowly truncate 5- or 7-nerved, paleate, triandrous or neuter; IV much the smallest, bisexual, articulate at the base and deciduous, membranous and oblong in flower, lanceolate subcoriaceous and scaberulous when mature, and awnless or with one terminal subgeniculate awn more or less twisted at the base, and with sometimes 2 lateral shorter capillary awns; base usually bearded. *Anthers* long. *Styles* 2, free or connate below; stigmas long. *Grain* free within gl. IV.—Species about 30, tropical.

A very well marked genus, referred by Baillon (Bull. Soc. Linn. Paris (1893) 1023, 1083, 1093) to *Panicum*, from which it differs in the inarticulate spikelets with the small thin gl. IV articulate at the base, as also in gl. IV being awned in many species and bearded at the base. The species are most difficult of determination, the Peninsular especially, which have not been so collected as to provide sufficient material for satisfactory study. I greatly doubt the value of the characters afforded by the awns.

* Gl. IV with 3 awns, the lateral short, capillary. (Miliosaccharum, *Nees.*)

1. **A. avenacea,** *Munro ex Thw. Enum. Pl. Zeyl.* 362; annual, leaves short, panicle ½–1 in. ovoid compact, spikelets ⅙–¼ in. subsessile, gl. I and II awned, III awned acuminate, IV hispid or bearded, median awn flattened and strongly twisted at the base. *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1891) 345; *Trim. Cat. Ceyl. Pl.* 106. A. Campbelliana, *Lisboa l.c.* 346. Avena malabarica, *Heyne ex Herb. Rottl.*—Arundinella? *Wall. Cat.* 8670.—Aira, No. 3, *Griff. Notul.* iii. 55, *Ic. Pl. Asiat.* t. 146, f. III.

Khasia Hills, in wet places, alt. 3–4000 ft. *Griffith*, &c. Deccan Peninsula, from the Concan southward. Burma; Pegu, *Kurz*; Moulmein, *Griffith*. Ceylon, in swamps, at Ratnapoora, *Thwaites*.

A weak straggling slender grass. *Leaves* 1–2 in., ovate-lanceolate, acute, glabrous or pilose, base amplexicaul and subpectinately ciliate; sheaths slender; ligule membranous, ciliate. *Panicle* pale green, branches short glabrous or hairy. *Glumes* I and II glabrous hairy or with tubercled-based bristles; I 3-5–nerved; II ¼ longer, 5-nerved; III acute or acuminate, 5-nerved, paleate, male or neuter; IV linear-oblong, more or less hispidly pilose or with lateral beards, base with long hairs; lateral awns triangular at the base, median about twice as long as the spikelet, geniculate above the twisted portion.

2. **A. tuberculata,** *Munro ex Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1891) 344; annual, erect, hispid with long white tubercled-based hairs, panicle lax, spikelets ⅙ in. shortly pedicelled, gl. I 3-nerved shortly awned, II nearly twice as long 5-nerved narrowed to a long beak, III male obtuse, IV glabrous, median awn slender twisted or not below.

The Concan; Poona, *Stocks*, &c. Central India, *King*.

Stem 12–18 in., sheaths leaves and panicle clothed with white spreading stiff hairs. *Leaves* 1–3 in., linear-lanceolate, base rounded; ligule a ridge of hairs. *Panicle* 3–6 in., narrowly oblong; branches ½–1 in., suberect, scaberulous. *Spikelets* ovoid, single or geminate, beak of gl. II as long as the rest of the gl.; III as long as I, narrow, glabrous, 5-nerved; IV lanceolate, scabrid when ripe, base pilose, median awn about twice as long as the spikelet, lateral acicular.

3. **A. mesophylla,** *Nees ex Steud. Syn. Gram.* 115; *Nees & Arn. ex Wight Cat.* n. 2347; annual, erect, pubescent or hirsute, leaves narrow, branches of compressed panicle spiciform short simple, spikelets sessile imbricate sub 4-ranked bifarious, gl. I. subawned 3-nerved, II rather longer

5–7-nerved, narrowed into a long beak, III obtuse male, IV lanceolate base pilose, median awn about $\frac{1}{3}$ longer than the spikelet slender hardly twisted.—Arundinella, *Wall. Cat.* n. 8663 B.

TRAVANCOR; Pulney Mts. and Courtallam, *Wight.*

Stem 1–2 ft., branching from the base, slender. *Leaves* 3–4 by $\frac{1}{6}$–$\frac{1}{4}$ in., base narrowed; ligule obscure. *Panicle* 2–4 in., hirsute, branches $\frac{1}{2}$–$\frac{3}{4}$ in., sessile (i.e. flowering to the base), rachis hairy; spikelets distichously spreading. Gl. I hardly awned, ovate; II about $\frac{1}{4}$ longer, lanceolate; III glabrous, narrowly oblong; IV not seen ripe, base bearded.

4. **A. nervosa,** *Nees in Wall. Cat.* n. 8662; annual, leaves narrow, softly hairy with spreading hairs, panicle much branched, branches capillary laxly many-fld., spikelets $\frac{1}{6}$ in. pedicelled, gl. I acuminate 3-nerved, II nearly twice as long 5-nerved narrowed into a long straight beak, III obtuse, IV ovate-lanceolate scaberulous, median awn slender. *Steud. Syn. Gram.* 115; *Wight Cat.* n. 2387, 1669 *a β γ*. Holcus nervosus, *Roxb. ex Wight Cat.* n. 1669 (*non Roxb. Fl. Ind.*) Ischæmum melicoides, *Koen. ms in Herb. Wight.* Andropogon hirsutum & scoparium, *Heyne in Herb. Rottl.* Agrostis scoparia, *Koen. ex Steud. l. c.* Anemagrostis Neesiana, *Wight & Arn. ex Steud. l. c.*—Arundinella, *Wall. Cat.* n. 8665.

SOUTHERN DECCAN PENINSULA; *Heyne*, *Wight*, &c.

Stem 12–18 in., slender, branched from the base. *Leaves* 4–8 by $\frac{1}{6}$–$\frac{1}{3}$ in., and sheaths usually copiously hairy on both surfaces with long white spreading hairs, base narrow; ligule membranous, ciliate. *Panicle* 6–10 in.; branches 2–4 in., fascicled and whorled, erect, flexuous, smooth, glabrous. *Spikelets* suberect, glabrous or nerves of gl. I and II more or less setose; gl. III neuter or male; IV slightly bearded at the base, median awn more or less twisted at the very slender base.—Wight's *β laxior* (Cat. 1669 *b*) is only a slender form.—Lisboa (*in Journ. Bomb. Nat. Hist. Soc.* v. (1891) 344) gives Concan, Coromandel and Ceylon as habitats, but without seeing specimens it is not safe to cite an authority in so difficult a genus. *A. nervosa, Duthie Grass. N.-W. Ind.* 13, from the Himalaya is probably one of the forms of *brasiliensis.*

5. **A. setosa,** *Trin. Diss.* ii. 63, *Panic. Gen.* 245; perennial, tall, leaves usually narrow, panicle 6–12 in., branches subsolitary slender erect laxly many-fld., spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. subsecund pedicelled, gl. I and II aristately acuminate glabrous or setose, I = $\frac{2}{3}$–$\frac{3}{4}$ II 3-nerved, II elongate lanceolate 5-nerved, III shorter obtuse or subacute 5–7-nerved, IV = $\frac{1}{2}$ III lanceolate scaberulous. *Steud. Syn. Gram.* 114; *Duthie Grass. N.W. Ind.* 13. A. hirsuta, *Nees ex Steud. l. c.* 115, & *Hochst. in Hohen. Pl. Ind. Or.* n. 920. A. setifera, *Steud. l. c.* 115. A. stricta, *Nees in Hook. Kew Journ.* ii. (1850) 102; *Dalz. & Gibs. Bomb. Fl.* 292. Milium cimicinoides, *Roxb. mss.*—?Arundinaria sp. nov. *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1891) 343.

WESTERN HIMALAYA; alt. 5–8000 ft., from Dalhousie to Nepal, *Wallich*, &c. KHASIA HILLS, alt. 3–6000 ft. BEHAR, on the Soane river, *J. D. H.* CENTRAL INDIA, *Clarke.* NILGHIRI HILLS, alt. 6000 ft., *Schmidt*, &c. CEYLON; at Trincomalee, *Ferguson.*—DISTRIB. Tonkin, China, Philippines.

Stems densely tufted on a hard rootstock, 1–3 ft., stout or slender, leafy. *Leaves* 6–10 in., convolute, glabrous pubescent or villous; ligule obscure. *Panicle* 2–6 in., sometimes corymbiform; branches 2–5 in., usually naked below. *Spikelets* often in pairs, pedicels with sometimes a few hairs near the tip. *Median awn* of gl. IV about as long as the spikelet.—The name *hirsuta* is attached to a specimen in Herb. Royle, so named no doubt by Nees.

6. **A. khaseana,** *Nees ex Steud. Syn. Gram.* 115; tall, robust, leaves narrow, panicle 6–18 in. branches long or short erect scabrid, spikelets ¼–⅓ in. setose with long tubercled based bristles, gl. I and II aristately acuminate, I = ¾ II 5-nerved, II 5-nerved, III acuminate or subaristate, IV oblong-lanceolate nearly smooth. Arundinella? *Wall. Cat.* n. 8672.

Khasia Hills; alt. 4–6000 ft., common.

Stem 3–6 ft., from a woody tufted rootstock, as thick as a swan's quill or less, nodes pubescent or bearded. *Leaves* 6–12 in., and sheaths glabrous pilose or villous; ligule a ridge of hairs. *Panicle* effuse or contracted or thyrsiform; branches 1–6 in. long. *Spikelets* pedicelled, crowded or distant, dark green; gl. IV. with the median awn variable in length, strongly twisted at the stout base, lateral awns short.

** Awn solitary, longer than the spikelet.

† *Spikelets about* $\frac{1}{12}$–$\frac{1}{10}$ *in. long.*

7. **A. agrostoides,** *Trin. Sp. Gram. Ic.* t. 265; annual, villous or glabrescent, leaves broad flat flaccid, panicle contracted, branches fascicled suberect, spikelets glabrous or setose, gl. I = ⅔ II ovate acuminate 3–5-nerved, II subaristately acuminate 5-nerved, III subacute 3–5-nerved, IV oblong-lanceolate scabrid. *Steud. Syn. Gram.* 116. A. holcoides, *Trin. in Bull. Sc. Acad. Petersb.* i. (1836) 71. Brandtia holcoides, *Kunth Revis. Gram.* ii. 129, t. 170; *Steud. l. c.*—Arundinella? *Wall. Cat.* n. 8671.

South Deccan, and the Concan, &c., *Wight*, &c. Tenasserim, *Wallich, Helfer.*—Distrib. Philippines.

Stem 6–18 in., stout or slender. *Leaves* 1–4 in., up to ½ in. broad, narrowed to the base, and sheaths usually clothed with long soft hairs; ligule a ridge of hairs. *Panicle* 1–9 in., always contracted; branches ¼–1 in., capillary, suberect, sparingly divided; gl. I and II rarely without bristles; III male or neuter; column of awn exserted, twisted.

Var. *ciliata;* panicle more copiously setose, spikelets rather larger. Arundinella ciliata, *Nees in Wight Cat.* n. 1666. A. pilosa, *Hochst. in Hohen. Pl. Ind. Or.* n. 647 & 935; *Miq. in Verh. Nedel. Ind.* iii. iv. (1851) 30. Holcus ciliatus, *Roxb. Fl. Ind.* i. 318. Andropogon paniceus, *Heyne ex Wall. l. c. & in Herb. Rottl.* Perotis polystachya, *Herb. Heyne ex Wall. l. c.* The Deccan Peninsula, from the Concan southward. Moulmein, *Griffith.*—Arundinella, *Wall. Cat.* n. 8664.

8. **A. tenella,** *Nees ex Steud. Syn. Gram.* 115; annual, glabrous, leaves flaccid lanceolate, panicle very large effuse copiously branched, rachis and branches capillary spreading, spikelets $\frac{1}{14}$–$\frac{1}{12}$ in. solitary long-pedicelled glabrous or sparsely setose, gl. I = ⅔ III 3-nerved, II ovate-lanceolate acuminate 5-nerved, III 5-nerved, IV oblong, awn twice as long as the spikelet. *Wight Cat.* n. 1668; *Dalz. & Gibs. Bomb. Fl.* 292; *Duthie Grass. N.W. Ind.* 13; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1891) 345. A. pumila, *Steud. l. c.* 114; *Lisboa l. c.* Acratherum pumilum, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 414, t. 100. Anemagrostis tenella, *Wight ex Steud. l. c.*

Western Himalaya; Garwhal, alt. 4000 ft. Rajpootana, on Mt. Abu, &c. Behar and Central India, alt. 3–4000 ft. The Khasia Hills, the Concan and Pegu.—Distrib. Abyssinia.

Stem 6–20 in., erect, soft, leafy, very sparsely hairy. *Leaves* from ovate and 2–4 in. long, to linear-lanceolate and 14 in. long, often ⅔ in. broad, acuminate, membranous, many-nerved, base narrow; sheath rarely hairy; ligule short, hairy. *Panicle* 2–10 in.; rachis slender, strict, erect; branches alternate or the lower subverticillately fascicled, each with widely spreading capillary branches and branchlets. *Spikelets* the smallest of the genus, usually shorter than their capillary pedicels; gl. IV scabrid above; column of awn slightly twisted.

9. **A. pygmea,** *Hook. f.*; annual, very small, slender, leaves chiefly radical narrow hispidly hairy nerveless except the midrib margins serrulate, panicle erect effuse, branches few capillary, spikelets few $\frac{1}{12}$ in. setose, gl. I = $\frac{2}{3}$ II ovate acute 3-nerved, II ovate-lanceolate long-acuminate 5-nerved, III obtuse obscurely 5-nerved, IV oblong truncate, awn twice as long as the spikelet.

North Canara, *Lisboa.*

Whole plant 6 inches high and very slender.—Closely allied to *A. tenella*, but very much smaller, with very slender stem, narrow chiefly radical leaves 1–1½ in. by $\frac{1}{10}$ in., sparsely clothed with long bristles, and a very sparingly divided panicle with few larger spikelets on very long capillary pedicels.—The specimens are very poor, and the character given may hence require modification.

10. **A. Metzii,** *Hochst. ex Miq. in Verh. Ned. Inst.* III lv. (1851) 31; tall, glabrous, leaves linear, panicle 3–10 in. effuse erect or inclined branches alternate or fascicled elongate, spikelets $\frac{1}{12}$–$\frac{1}{10}$ in. subsecund, long or short pedicelled glabrous or sparsely setulose, gl. I = $\frac{3}{4}$ II ovate acuminate 3-nerved, II ovate-lanceolate acuminate 5-nerved, III acute 5–7-nerved, IV oblong truncate obtuse or retuse scaberulous, awn about twice as long as the spikelet. *Steud. Syn. Gram.* 116 (*excl. Syn. Roxb.*); *Hochst. in Herb. Hohenack.* n. 257. A. agrostoides, *Trin.* var. *tenella, Herb. Ind. Or. Hf. & T.* Agrostis fusca, *Heyne ex Wall. Cat. & in Herb. Rottler.*—Arundinella, *Wall. Cat.* n. 8668.

Nilghiri Hills; the Wynaad, *Heyne.* The Concan and Canara, *Law, Metz, Thomson, Woodrow*, &c.

Annual? 1–3 ft. high. *Leaves* 4–6 by $\frac{1}{4}$–$\frac{1}{3}$ in., scaberulous and sheath more or less hairy or glabrous. *Panicle* 1–8 in.; rachis slender, smooth or subscaberulous; branches 1–4 in., uniformly flowering. *Spikelets* green or purplish, solitary or 2-nate, longer or shorter than their pedicels which are sometimes $\frac{1}{4}$ in. long; gl. I nerves sometimes scabrid; IV very obscurely bearded at the base, awn straight.—Hohenacker's specimens appear to be annual, Heyne's have a small hard rootstock. This is certainly not Roxburgh's *Holcus nervosus*, which Steudel cites for it. The panicle varies greatly in length, breadth and composition; in small specimens it is short and triangular with spreading nearly simple branches, in taller it is more effuse with long flexuous branches and much longer pedicels.

†† *Spikelets more than $\frac{1}{10}$ in. long.*

11. **A. villosa,** *Arn. ex Steud. Syn. Gram.* 115; stems tufted villous below the very narrow panicle, rachis villous, branches spiciform short simple hirsute, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. secund crowded setosely hirsute, gl. I = $\frac{3}{4}$ II ovate acuminate 3–5-nerved, II subaristately acuminate 5-nerved, III acute 5-nerved neuter or male, IV oblong-lanceolate very minutely scaberulous, awn not twice as long as the spikelet. *Thw. Enum. Pl. Zeyl.* 362; *Trim. Cat. Ceyl. Pl.* 106.

Eastern Himalaya, the Khasia Hills, Central India, the Deccan Peninsula & Ceylon.

Stem 12–16 in., slender, stiff, leafy at the villous base. *Leaves* 4–8 by $\frac{1}{12}$–$\frac{1}{10}$ in., strict, rather rigid, glabrous tomentose or villous; ligule of long hairs. *Panicle* 2–4 in., spiciform; branches $\frac{1}{2}$–$\frac{3}{4}$ in., brown. *Spikelets* subdistichously crowded, spreading or erect; column of awn included twisted.—Nees, according to Steudel, describes gl. IV. as 2-toothed. I find it to be usually rounded at the tip, but 2-toothed in var. *himalaica.* Gl. III is more acute than is usual in the genus and its palea larger.

Var. *Wightii*; leaves very narrow convolute, basal sheaths woolly.

Var. *Heyne*; taller, stouter, basal sheaths nearly naked, leaves longer broader and flat 12 by $\frac{1}{3}$ in., panicle 4 in. long. Andropogon paniceus, *Herb. Heyne ex Wall. Cat.* n. 8663 A.—Courtallam, *Wight.*

Var. *himalaica*; basal sheaths naked, leaves 2–6 by $\frac{1}{4}$–$\frac{1}{3}$ in. flat, spikes sometimes shortly peduncled, gl. IV 2-toothed. A. Hookerii, *Munro ms.*—Bhotan, E. Nepal and Sikkim Himalaya, alt. 6–11,000 ft., *Griffith, J. D. H., Clarke.*

12. **A. birmanica,** *Hook. f.*; annual, stout, stem glabrous, leaves linear-lanceolate flat hirsute, panicle linear-oblong interrupted, branches sessile simple or sparingly divided, rachis ciliate and scaberulous, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. densely crowded subsessile glabrous or with a few setae, gl. I = $\frac{2}{3}$ II ovate subaristately acuminate 5-nerved, II ovate-lanceolate long-acuminate 5-nerved, III acute 5-nerved, IV oblong-lanceolate scabrid, awn not twice the length of the spikelet.

BURMA; Rangoon, *M'Lelland, Scott, Kurz.*

Stem tufted, 1–2 ft., stout, soft, leafy, nearly as thick as a goose-quill, nodes bearded. *Leaves* 4–8 by $\frac{1}{2}$–$\frac{2}{3}$ in., base subcordate, sheath hirsute; ligule a narrow ciliate membrane. *Panicle* 3–7 in., very pale, branches or spikes 1–2 in sessile, erect; gl. III male female or neuter, awn of IV with twisted included column.—Near *A. villosa,* but annual, with soft stems and leaves much smaller and hardly setose spikelets, stem glabrous below the panicle.

13. **A. brasiliensis,** *Raddi, Agrost. Bras.* 37, t. i. fig. 3; stem erect stout or slender, leaves broad or narrow, panicle pyramidal subcorymbose or thyrsiform sparingly or copiously branched, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. subsecund longer than their pedicels usually quite glabrous, gl. I = $\frac{2}{3}$ II ovate-lanceolate acuminate 3-nerved, II lanceolate finely acuminate 5-nerved, III subacute 5-nerved, IV oblong-lanceolate acute scaberulous, awn twice as long as the spikelet. *Trin. Diss.* ii. 62, *Panic. Gen.* 246, *Sp. Gram. Ic.* t. 266; *Doell in Mart. Fl. Bras.* ii. II, 298, t. 38. A. Ecklonii, *Nees Fl. Afr. Austr.* 80. A. martinicensis, *Trin. Diss.* ii. 62; *Panic. Gen.* 246; *Griseb. Fl. Brit. W. Ind.* 556. A. Mikani, *Nees Agrost. Bras.* 465. A. nepalensis, *Trin. Diss.* ii. 62; *Panic. Gen.* 335, *Sp. Gram. Ic.* t. 268; *Duthie Grass. N.W. Ind.* 13; *Steud. Syn. Gram.* 115; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1891), 343. A. pallida, *Nees Agrost. Bras.* 465. A. rigida, *Nees Fl. Afr. Austr.* 80. A. Ritchiei, *Munro ex Lisboa l. c.* A. stricta, *Nees in Hook. Kew Journ.* ii. (1850), 102; ? *Dalz. & Gibs. Bomb. Fl.* 293. Acratherum miliaceum, *Link Hort. Berol.* i. 320. Orthopogon agrostoides, *Trev. ex Steud. Nom.*, *Ed.* II. ii. 234. Aira brasiliensis, *Spreng. Syst. Veg.* i. 278. Goldbachia Mikani, *Trin. in Spreng. Neue Entdeck.* ii. 81. Ischæmum hispidum, *H. B. & K. Nov. Gen. & Sp.* i. 194; *Kunth Revis. Gram.* i. 373, t. 100; *Enum. Pl.* i. 515. Riedeliea Mikani, *Trin. ex Kunth Enum. l. c.* Holcus nervosus, *Roxb. Fl. Ind.* i. 318. Thysanachne scoparia, *Presl Nov. Pl. Gen. Diss.* 1829, *cum Ic. Rel. Hænk.* i. 253. Andropogon hispidus, *Willd. Sp. Pl.* iv. 908. A. ? epiphyllus, *Wall. Cat.* n. 8667 A. A. virens, *Spreng. Syst.* i. 287.—Airacea, *Griff. Notul.* 53, *Ic. Pl. Asiat.* t. 141, f. 11.—Arundinella, *Wall. Cat.* n. 8666, 8667.

Throughout the hilly parts of INDIA, from the Himalaya, ascending to 7000 ft., to BURMA and CEYLON.—DISTRIB. China, Malaga, Australia, S. Africa, trop. America.

Perennial; rootstock stout, hard, creeping and sending out stout sheathed branches sometimes as thick as a goose-quill, or tufted and intricately branched.

Stems 1–5 ft., from the thickness of a sparrow's to a goose quill, simple or branched, nodes glabrous or pubescent. *Leaves* 6–12 by $\frac{1}{6}$–$\frac{2}{3}$ in., usually ciliate at the narrow base; ligule of soft hairs. *Panicle* 4–18 in.; branches 1–10 in., few or many, fascicled or subverticillate, densely or laxly imbricating, usually slender and undivided. *Spikelets* distant or crowded, green or purplish; gl. I sometimes very sparingly setose; III male or neuter, rarely imperfectly bisexual; IV always bearded at the base, column of awn more or less twisted.—An abundant grass in many parts of India, but so variable that it is difficult to formulate a character for it that will not include other species. Dr. Stapf has aided me in the examination of a mass of Indian specimens, including many hundreds collected by Clarke over the length and breadth of India; and especially in the more important matter of identifying *A. nepalensis* with the American *A. brasiliensis*, and various others here brought together as synonyms. The largest form is Wallich's 8666 A, with a stout creeping woody rhizome, sheathed surculi as thick as a goose-quill, a stout stem 5 ft. high, broad often hirsute leaves, and a large panicle 6–12 in. long of spikelets $\frac{1}{8}$ in. long; it is a tropical and subtropical plant extending in the Himalaya from Kumaon eastward, and is common in the Khasia Hills. Wallich's 8666 B (from the Calcutta Bot. Gardens?) is a tall much more slender plant, with matted roots, very narrow leaves with tubercle-based hairs, and a slender thin panicle. His 8667 A. B. from Burma, is a tall plant with soft hairy leaves $\frac{1}{4}$–$\frac{1}{2}$ in. broad, and an effuse subpyramidal panicle with fascicled capillary branches and smaller spikelets about $\frac{1}{8}$ in. long. It is common throughout the lower Himalaya and Khasia Hills. Another variety, with a straggling branching rootstock, proliferously fascicled branches sheathed at the base, short or long glabrous or hairy linear-lanceolate leaves, and small oblong panicles with few slender branches and few spikelets, occurs at elevations of 4–6000 ft. Lastly, there is a common Himalayan slender form from the Panjab eastwards, six inches to a foot high, with tufted roots, very narrow leaves, a small oblong panicle, and small spikelets. *A. Ritchiei*, Munro, is a tall stout Concan form, 2½ ft. high, with a shortly creeping rootstock, narrow obscurely hairy convolute leaves, a very narrow panicle, and pale small spikelets.

14. **A. fuscata,** *Nees ex Buese in Miq. Pl. Jungh.* 359; perennial, stout, rather short, leaves short flat hirsute, panicle oblong dense-fld. usually purplish, rachis stout pubescent or villous, branches crowded erect, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. secund crowded sessile or shortly pedicelled glabrous or sparsely setose, gl. I = $\frac{3}{4}$ II broadly ovate acuminate 3–5-nerved, II ovate-lanceolate acuminate 5-nerved, III obtuse or truncate 5-nerved, IV oblong-lanceolate emarginate scabrid, awn short. *Steud. Syn. Gram.* 114; *Wight Cat.* n. 1667; A. purpurea, *Hochst. ex Steud. l. c.* 115; ?*Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1891) 345. Acratherum fuscatum, *Nees ex Steud. l. c.*

The Concan (*Lisboa*). Nilghiri Hills, *Heyne*; Ootacamund, alt. 6000 ft., *Wight, Lawson, King.* Pegu, at Rangoon, *Kurz.*

Stem 1–2 ft., stiff, glabrous or pubescent below the panicle. *Leaves* 1–8 by $\frac{1}{4}$–$\frac{1}{3}$ in., lanceolate, tapering from the base to the tip, coriaceous, strongly nerved; sheath hirsute; ligule very short, ciliate. *Panicle* 2–5 in., erect; rachis and subsimple branches stiff, angular, scaberulous. *Spikelets* stouter and glume much broader than in any form of *brasiliensis.*—Heyne's specimens are more slender than Lawson's. I have seen no specimens from the Concan. The Rangoon plant has a very pale panicle.

15. **A. capillaris,** *Hook. f.*; perennial, very slender, leaves narrow glabrous or hairy, panicle oblong branches alternate slender flexuous naked below, spikelets $\frac{1}{6}$ in. distant solitary glabrous shorter than their pedicels, gl. I = $\frac{2}{3}$ II ovate-lanceolate acuminate 3–5-nerved, II lanceolate acuminate 5-nerved, III not exceeding I obtuse 5-nerved, IV lanceolate acute scabrid, awn about twice as long as the spikelet. A mutica, *Nees ex Steud. Syn. Gram.* 116; ? *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1891)

8. Andropogon capillaris, *Herb. Heyne.*—Arundinella sp., *Wall. Cat.* n. 8665 A.

The DECCAN, *Heyne.* PULNEY HILLS, *Herb. Wight* (n. 3338).

Stem erect from a tuberous rhizome which is clothed with the woolly bases of leaf-sheaths. *Leaves* 6–12 by $\frac{1}{6}$–$\frac{1}{4}$ in., acuminate, base rather narrow; upper sheaths glabrous; ligule a ridge of hairs. *Panicle* 5–7 in., flexuous; rachis filiform, scaberulous; branches few, 4–6 in., naked below except a solitary long-pedicelled axillary spikelet; pedicels capillary.—An obscure plant. Nees describes the leaves as with sparsely setulose margins, and gl. IV as mucronate, from which it is evident that the awn has fallen away in his specimen. This latter suggested the name *mutica*, which, being misleading, I have replaced by Heyne's of *capillaris*. Wight's Pulney specimens have a slightly hairy panicle 3 in. long, with more numerous close-set branches and closer spikelets. Lisboa (Journ. Bomb. Nat. Hist. Soc. v. (1890) 344) gives *mutica* as a common plant all over Bombay, but without seeing specimens I cannot confirm this.

16. **A. laxiflora,** *Hook. f.*; very slender, glabrous, leaves narrow, panicle effuse, branches spreading capillary solitary alternate or opposite or the lower fascicled, branchlets spreading, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. solitary shorter than their capillary pedicels, gl. I = $\frac{2}{3}$ II ovate acuminate 3-nerved, II ovate-lanceolate 5-nerved, III longer than I oblong acute, IV longer than III oblong-lanceolate scaberulous, awn 0 or shortly exserted. A. nervosa, *Thw. Enum. Pl. Zeyl.* 362 (*excl. Syn.*); *Trim. Cat. Ceyl. Pl.* 106.

CEYLON, *Gardner*; Central Province, alt. 3–5000 ft., *Thwaites* (C.P. 919).

Annual? glabrous. *Stem* 12–30 in., tufted, geniculately ascending, nodes glabrous. *Leaves* 4–8 by $\frac{1}{8}$–$\frac{1}{3}$ in., finely acuminate; ligule narrow, membranous, ciliate. *Panicle* 4–6 in., green. *Gl.* I scabrid on the keel or not; IV bearded at the base or not; column of awn twisted.—The open panicle with long capillary pedicels of the spikelet and quite acute gl. III which is $\frac{1}{4}$ longer than I, characterize this species. One specimen (*Gardner*, n. 1007) has no trace of an awn.

*** Awn 0, or very short and hardly exserted (see also *A. laxiflora*).

17. **A. Wallichii,** *Nees ex Steud. Syn. Gram.* 114; perennial, stout, erect, panicle elongate contracted strict, branches 1–1$\frac{1}{2}$ in. stout stiff spiciform, spikelets 3–4-seriate ovoid secund densely imbricate very stoutly pedicelled setose, gl. I nearly = II ovate acute 3–5-nerved, III oblong obtuse 5-nerved, IV ovoid subacute nearly smooth, awn 0 or very short. *Duthie Grass. N.W. Ind.* 13. Panicum strictum, *Roxb. Fl. Ind.* i. 303. P. bengalense, *Spreng. Syst.* i. 311; *Steud. Syn. Gram.* 48. P. pyramidale, β? *Herb. Ham. ex Wall. Cat.* n. 8700.—Panicum, *Wall. Cat.* n. 8700.—Arundinella? *Wall. Cat.* n. 8669.

TROPICAL HIMALAYA; on dry banks from Simla to Sikkim, alt. 1–6000 ft. BENGAL, BEHAR, the KHASIA, NAGA and SATPURA HILLS. BURMA; Shan Hills, *Manders.*—DISTRIB. Tonkin.

Stem 1–3 ft., from a woody creeping or tufted hard rhizome; nodes bearded or not. *Leaves* 12–18 by $\frac{1}{3}$–$\frac{2}{3}$ in., all radical in small forms, glabrous hairy or villous, lanceolate, acuminate; sheath smooth scabrid or villous; ligule a ridge of hairs. *Panicle* 6–12 in. (the stoutest of the Indian species); branches $\frac{1}{2}$–1 in., lower sometimes whorled, erecto-patent, flowering to the base; rachis angular, scabrid. *Spikelets* green or purplish; gl. IV naked at the base; awn not twisted.

18. **A. Clarkei,** *Hook. f.*; tall, very stout, leaves very long, panicle very large subcorymbiform, branches 3–8 in. fascicled erect very slender simple upper much longer than the rachis, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. 1–2-seriate secund shortly pedicelled, gl. I = $\frac{3}{4}$ II ovate acute 5-nerved, II ovate-

lanceolate acute 5-nerved, III oblong obtuse, IV ovate-lanceolate, awn very shortly exserted base twisted.

SIKKIM TERAI, *Clarke.*

Stem 6 ft. or more, stouter than a swan's quill above. *Leaves* 2–3 ft. by 1 in., coriaceous, hairy beneath; sheath long, margins fimbriate; ligule a ridge of hairs. *Panicle* 12–18 by 4–6 in.; rachis stout, erect, angular, nearly smooth; branches rarely divided, filiform, scaberulous. *Spikelets* solitary or 2-nate, pale, usually longer than their pedicels.—The great size, large panicle with long branches, the upper far exceeding the rachis, will characterize this gigantic species.

19. **A. leptochloa,** *Hook. f.*; tall, slender, leaves narrow, panicle pyramidal or subcorymbiform often interrupted, branches short simple slender alternate whorled or fascicled, spikelets $\frac{1}{10}$ in. 1–2-seriate secund sessile or pedicelled glabrous, gl. I = $\frac{3}{4}$ II ovate acuminate 3-nerved, II ovate-lanceolate acuminate 5-nerved, III ovate-oblong subacute 5-nerved, IV lanceolate scaberulous base naked, awn minute or 0. Panicum leptochloa, *Nees ex Steud. Syn. Gram.* 62; *Wight Cat.* n. 1621; *Steud. Syn. Gram.* 62; *Thw. Enum. Pl. Zeyl.* 360; *Trim. Cat. Ceyl. Pl.* 105. P. zeylanicum, *Arn. mss.* Leptochloa ? panicoides, *Herb. Wight,* n. 125, *ex Steud. l. c.* L. pectinata, *Steud. l. c.*

MALABAR; at Quilon, *Wight.* CEYLON, not uncommon, *Thwaites.*

Stem 2–4 ft., from a woody rootstock, as thick as a crow-quill or less; nodes glabrous. *Leaves* 6–10 in., rarely $\frac{1}{4}$ in. broad, glabrous or hairy; sheath smooth or hairy; ligule obscure. *Panicle* 2–14 in., rachis faintly scaberulous; branches 1–4 in., suberect, rarely spreading, slender, not flexuous; axils bearded or ciliate. *Spikelets* rarely longer than their pedicels; gls. thin, nerves of I scabrid.

Var. *gracillima*; more slender, leaves narrower, panicle pyramidal, branches alternate very distant, spikelets more distant very shortly pedicelled.—Cochin, *Johnstone,* in wet places. Nilambar, *Lawson.*

20. **A. Lawsoni,** *Hook. f.*; tall, stout, leaves linear-lanceolate acute scabrid above, panicle tall pyramidal, rachis scabrid, branches fascicled or subverticillate erecto-patent filiform strict simple or lower branched, spikelets $\frac{1}{8}$ in. solitary or 2-nate glabrous about equalling their pedicels, gl. I = $\frac{2}{3}$ II ovate acuminate 3–5-nerved, II ovate-lanceolate acuminate 5-nerved, III obtuse 5–7-nerved, IV lanceolate scaberulous base naked, awn 0.

NILGHIRI HILLS; in swamps at Goodaloor, alt. 3000 ft., *Lawson.*

Stem erect, 3–4 ft. high, nearly as thick as the little finger below. *Leaves,* lower few, 8–12 by $\frac{2}{3}$ in., narrowed from the base to the acuminate tip, flat, rigid, upper very narrow; midrib slender; nerves very many and close, margins scabrid; sheath hairy; ligule 0. *Panicle* dull blue-purple; rachis strict and branches scaberulous; branches alternate or fascicled, lower 4–6 in. branching at the base. *Spikelets* glabrous, sessile or pedicelled, longer or shorter than their slender pedicels; gls. rather coriaceous, nerves strong.—A very distinct-looking plant, unlike any known to me, but I have seen only one specimen, and it may prove to be a form of *A. leptochloa.*

21. **A. gigantea,** *Dalz. in Dalz. & Gibs. Bomb. Fl.* 293; tall, stout, upper leaves 1–1$\frac{1}{4}$ in. broad lanceolate base rounded or subcordate, panicle subcorymbosely thyrsiform, rachis stout, branches 2–4 in. densely crowded slender simple erect angular, spikelets $\frac{1}{12}$ in. 2–3 seriate secund very shortly pedicelled, gl. I = $\frac{3}{4}$ II broadly ovate acute 3-nerved, II ovate acuminate

5-nerved, III rather longer than I, obtuse 5-nerved, IV lanceolate base naked, awn 0.

The Concan, *Stocks*; Kineshwur, at the foot of the Ghats, *Dalz. & Gibs.*

Stem 6 ft., branched below, as thick as a goose-quill at 18 in. below the panicle, nodes swollen. *Leaves* 12–24 in., finely acuminate, subcoriaceous, many-nerved, scabrid above, glabrous or sparingly hairy, margins smooth; sheath sparingly hairy; ligule a narrow glabrous membrane. *Panicle* 5–7 in. long by 2–3 broad, brush-like, branches uniform, quite concealing the angular scabrid rachis. *Spikelets* brownish, short and broad, keel of gl. I scabrid.—A distinct-looking plant, nearest perhaps to *A. Clarkei* in inflorescence.

22. **A. blephariphylla,** *Trim. mss.*; tall, stout, leafy, leaves long broad thin smooth, margins setosely serrulate, panicle broadly oblong, branches laxly whorled spreading filiform, spikelets $\frac{1}{8}$ in. subsolitary as long as their pedicels glabrous, gl. I = $\frac{3}{4}$ II broadly ovate acute 3-nerved, II ovate acuminate 5-nerved, IV oblong subacute 5-nerved, IV lanceolate scaberulous base naked, awn 0.—Panicum blephariphyllum, *Trim. in Lond. Journ. Bot.* xxii. (1885) 272, *Cat. Ceyl. Pl.* 105.

Ceylon; margins of woods by the sea at Resanwelle, *Ferguson*, *Trimen*.

Annual? *Stem* 3 ft. and upwards, nodes glabrous. *Leaves* 12–18 by nearly 1 in., rather membranous; sheath loose; ligule obscure. *Panicle* 4–6 in.; rachis strict, nearly smooth; branches spreading or subrecurved; axils hairy.—The specimens are few, but the species appears to be a distinct one, nearest to *A. leptochloa*, which has narrower more coriaceous leaves and smaller spikelets.

23. **A. Thwaitesii,** *Hook. f.*; very slender, glabrous, leaves very narrow, panicle oblong effuse, branches capillary solitary alternate or the lower fascicled, branchlets spreading, spikelets $\frac{1}{8}$ in. solitary shorter than their capillary pedicels, gl. I = $\frac{2}{3}$ III very broadly ovate acute 3–5-nerved, II broadly ovate acuminate 5-nerved, III as long as II acute 7-nerved, IV lanceolate acute, awn 0. A. nervosa, var. *Thwaites mss.*

Ceylon, *Walker*?; Ambagamowa district, *Thwaites* (C.P. 3782).

Stem 2–3 ft., strict, erect; nodes glabrous. *Leaves* 4–8 by $\frac{1}{8}$–$\frac{1}{4}$ in., finely acuminate; ligule a short ciliate membrane. *Panicle* 3–5 in., branches naked at the base. *Spikelets* more turgid and coriaceous than usual in the genus, with shorter, broader, shorter pointed, purplish glumes; IV naked at the base.—Nearly allied to *A. laxiflora*, but has much broader glumes, of which III is longer than I and about as long as II.

UNDETERMINABLE SPECIES.

A. indica, *Trin. mss. ex Steud. Nom. Ed.* II i. 143 = Agrostis biseta, *Herb. Spreng.*—Name only.

A. spicata, *Dalz. in Dalz. & Gibs. Bomb. Fl.* 293; stem 1 ft., leaves 1–1½ by ¼ in. ensiform and sheaths hispid, spike 1½ in. cylindric (as in *Setaria*) dense-fld. gl. I $\frac{1}{12}$ in. lanceolate subulate subpilose 3-nerved, upper $\frac{1}{5}$ in. long-attenuated and folded concealing the awn.—The Concan, on the Mahableshwur Hills, common.

A. japonica, *Duthie Grass. N.W. India*, 13.

13. SETARIA, *Beauv.*

Spikelets 1- rarely 2-fld., not awned, clustered on the very short branches of a spike-like or narrowly pyramidal panicle, articulate on very short pedicels which bear a persistent involucel of few or many scabrid or barbed bristles (barren branchlets). *Glumes* 4, membranous; I = about

½ III; II = or shorter than IV; III neuter, rarely paleate and male, 5–7-nerved; IV coriaceous, plano-convex, bisexual, triandrous. *Styles* distinct. Grain free within the hardened gl. and palea.—Species about 10, temperate and tropical.

Distinguished from *Panicum* by the involucel, but connected with it by *P. plicatum* and *S. Forbesiana*; and from *Pennisetum* by the persistent involucels and articulate deciduous spikelets. The species are for the most part difficult of limitation, and much of the synonymy requires revision.

1. **S. italica,** *Beauv. Agrost.* 51; leaves broad, panicle dense inclined or nodding simple and cylindric or lobed or compound, bristles few smooth or with minute spreading barbs, gl. I oblong or subglobose nearly smooth. *Kunth Revis. Gram.* 146, *Enum. Pl.* i. 153, *Suppl.* 108; *Reichb. Ic. Fl. Germ.* t. 47; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 22; *Wall. Cat.* n. 8643; *Trim. Cat. Cevl. Pl.* 107; *Aitchis. Cat. Panjab. Pl.* 162; *Duthie Grass. N.W. Ind.* 8, *Field & Gard. Crops*, 5, t. 25, *Fodd. Grass. N. Ind.* 15; *Miq. Fl. Ind. Bat.* iii. 467; *Griseb. Fl. Brit. W. Ind.* 554. S. asiatica, *Hort. ex Reichb. Fl. Germ. Excurs.* 29. S. compacta, *Schur. Enum. Pl. Transylv.* 967, *Index.* S. erythrosperma, flavida, persica & violacea, *Hornen. ex Reichb. l. c.* S. germanica, *Beauv. Agrost.* 51, t. 13. S. globularis, *Presl. Rel. Haenk.* 407; *Miq. l. c.* S. macrochæta, *Sch. Mant.* ii. 274. S. maritima, *R. & S. Syst.* ii. 492. S. melinis, *Link. ex Steud. Nom. Ed.* II. ii. 574. S. panis, *Jessen Deutschl. Graes.* 248. Panicum ægyptiacum & sibiricum, *Hort. ex Roem. & Sch. Syst.* ii. 493. P. asiaticum, mel-frugum, & serotinum, *Hort. ex Schult. Mant.* ii. 598, 599. P. attenuatum, setaceum & setosum, *Hort. ex Trin. Gram. Panic.* 166. P. brevisetum, *Doell Fl. Grossh. Bad.* 233. P. compactum, *Kit. in Schult. Œster. Fl. Ed.* II. i. 212. P. elongatum, *Salisb. Prodr.* 18. P. germanicum & indicum, *Mill. Gard. Dict. Ed.* 8, n. 1 & 3. P. globulare, *Steud. Nom. l. c.* 51; *Syn. Gram. l. c.* P. glomeratum, *Moench. Meth.* 207. P. intermedium & erythrospermum, *Vahl ex Hornem. Hort. Hafn.* i. 82. P. italicum, *Linn. Sp. Pl.* 56, *Host l. c.* t. 314; *Trin. Sp. Gram. Ic.* t. 188, 189; *Roxb. Fl. Ind.* i. 302; *Steud. Syn. Gram.* 51; *Dalz. & Gibs. Bomb. Fl. Suppl.* 98; *Wight Cat.* n. 1645. P. miliaceum, *Blanco Fl. Filip. Ed.* I. 39. P. maritimum, *Hort. ex Lamk. Encycl.* iv. 737. P. pumilum, *Link Enum. Hort. Berol.* 76. P. vulgare, *Wallr.* in *Linnæa*, xiv. (1840) 542. Pennisetum macrochaetum, *Jacq. Eclog. Gram.* iii. 36, t. 25; *Kunth Enum.* i. 152.—Setaria, *Wall. Cat.* n. 8651.—*Rheede Hort. Mal.* xii. t. 79.

HAB. Cult. throughout India, and up to 6000 ft. in the Himalaya.—DISTRIB. Most warm, temperate and tropical countries.

Stem 2–5 ft., usually branched, tufted, rooting towards the base, often robust. Annual. *Leaves* often long broad, margins retrorsely hispid, sheath smooth, mouth bearded. *Spiciform* panicle 3–5 in. long, very variable in diameter, number and length of bristles of involucel, and size and form of gl. IV.—Possibly a cultivated form of *S. viridis*, but nothing is known of its origin, which reaches back to the period of the Swiss Lake-dwellings. It has from time immemorial been cultivated in Asia, and one form is regarded by the natives as indigenous in Japan and China (see De Candolle l'Origine des Plantes Cultivées, p. 303). Duthie and Stewart regard some small forms as indigenous in India, but they are more probably escapes or their progeny.

2. **S. glauca,** *Beauv. Agrost.* 51; panicle spiciform cylindric, involucels of 6–12 bristles with spreading or erect barbs, gl. IV transversely rugose. *Kunth Enum. Pl.* i. 149, *Suppl.* 106; *Wall. Cat.* n. 8639; *Griff. Notul.* 44, *Ic. Pl. Asiat.* t. 149, f. 1; *Dalz. & Gibs. Bomb. Fl.* 293; *Aitchis.*

Cat. Panjab. Pl. 162; *Trim. Cat. Ceyl. Pl.* 105; *Miq. Fl. Ind. Bat.* iii. 466; *Duthie Grass. N.W. Ind.* 8, *Indig. Fodd. Grass.* t. x., *Fodd. Grass. N. Ind.* 14; *Griseb. Fl. Brit. W. Ind.* 554; *Benth. Fl. Austral.* vii 492; *Reichb. Ic. Fl. Germ.* t. 47; *Boiss. Fl. Orient.* v. 442; *Baker Fl. Maurit.* 442. S. aurea, *Hochst. ex A. Br. in Flora,* xxiv. (1841) 276. S. auricoma, *Link. ex Loud. Hort. Britt.* 25. S. chrysantha, *Heynh. Nom.* ii. 661. S. flava, *Kunth Rev. Gram.* i. 46. S. helvola, *Roem. & Sch. l. c.*; *Miq. l.c.* 467. S. humifusa & rubicunda, *Dum. Obs. Gram. Belg.* 139. S. pumila, *Sch. Mant.* ii. 274. ? S. sciuroidea, *C. Muell. in Bot. Zeit.* xix. (1861) 316. S. tejucensis, *Kunth Enum. Pl.* i. 150. S. Ventenatii, *Kunth Rev. Gram.* i. 251, t. 37. S. dasyura, *Hort. Hal. ex Schlecht in Linnæa,* xxvi. (1853) 463. S. penicillata, *Nees in Wall. Cat.* n. 8640 A. B. C. E. Panicum alopecuroides, *Koen. ex Trin. Gram. Panic.* 162. P. chrysanthum, *Steud. Nom. Ed.* 2, ii. 254. P. flavescens, *Moench. Meth.* 206. P. glaucum, *Linn. Sp. Pl.* 56; *Host Gram. Austr.* ii. t. 16; *Trin. Sp. Gram. Ic.* t. 195; *Roxb. Fl. Ind.* i. 285; *Thw. Enum.* 361; *Wight Cat.* n. 1643; *Benth. Fl. Hongk.* 411; *Nees Fl. Afr. Austr.* 55, *Agrost. Bras.* 241. P. helvolum, *Linn. f. Suppl.* 107. P. holcoides, *Jacq. Eclog. Gram.* t. 22. P. lævigatum, *Ell. Sketch.* i. 112. P. lutescens, *Weig. Obs.* 20. P. luteum, *Guldenst. Reis.* ii. 58. P. minimum, *Wall. Cat.* 8641 B. P. penicillatum, *Willd. ex Nees Agrost. Bras.* 242; *Willd.* β (or *P. helvolum,* Linn.) *Wight Cat.* n. 1644. P. polystachyum, *Herb. Heyne ex Wall. Cat.* 8639 E. P. pumilum, *Poir. Encycl.* iv. 273 (*ex Kunth l. c.*). P. Ventenatii, *Steud. Nom. Ed.* II, ii. 265. P. verticillatum, *Rottl. ex Spreng. Syst.* i. 304. P. viride, *Poll. Hist. Pl. Palat.* i. 55. Pennisetum glaucum & helvolum, *Br. Prodr.* 195.

Throughout INDIA, especially in cult. ground.—DISTRIB. All warm, temp. and trop. regions.

Annual. *Stem* 1–2 ft. erect or ascending, simple or branched. *Leaves* broad or narrow, sometimes 18 by $\frac{1}{3}$ in., flat, glabrous or sparsely hairy, margins scabrid. *Spiciform panicles* cylindric, 1–7 in., dense-fld., usually yellow, rarely purplish or green, rarely interrupted; sometimes reduced to an ovoid head with very few spikelets; bristles of involucel 6-12, very variable in length, from a little longer to four times as long as the ovoid spikelet; gl. I minute; II rather shorter than III, subacute; III usually empty, sometimes paleate and male; IV broadly ovoid, very convex.

Var. *macrocarpa*; gl. III and IV equal and subsimilar in the ripe state, forming a subglobose crustaceous rugose sphere $\frac{1}{6}$ in. diam., III paleate empty, IV fem., bristles of involucel $\frac{1}{2}$ in. pale rufous.—The Panjab, *Aitchison,* Western Bengal and Behar, *Kurz.*—A remarkable form, but passing into the ordinary state of the plant by intermediates.

Var. *parviflora,* Munro mss.; stems 6–10 in. branched and decumbent below, leaves smaller, spiciform panicle $\frac{1}{2}$–1 in., ovoid nearly white, bristles of involucel $\frac{1}{6}$–$\frac{1}{4}$ in., gl. IV much less strongly rugose.—? S. imberbis, *Roem. & Sch.* ii. 891; *Wall. Cat.* n. 8641 A *in part,* B–F. Panicum Codaea, *Herb. Ham. in Wall. Cat. l. c.*—Kumaon, alt. 4–5000 ft., *Duthie.* Khasia Hills, alt. 5000 ft., *Clarke.* The Concan, Madras and Burma, *Wallich.*—Probably the *S. imberbis,* of Africa, &c., but a smaller plant, with very small spikes, differing in this respect and in the less rugose gl. IV from *S. glauca.*

3. **S. intermedia,** *Roem. & Sch. Syst.* ii. 489; panicle narrowly pyramidal subspiciform or very slender with segregate clusters of involucels, bristles of involucel with spreading or suberect barbs, gl. IV small oblong subrugulose. *Kunth Enum. Pl.* i. 150; *Aitch. Cat. Panjab. Pl.* 162; *Trim. Cat. Ceyl. Pl.* 105; *Duthie Grass. N.W. Ind.* 9, *Fodd. Grass. N. Ind.* 14; *Miq. Fl. Ind. Bat.* iii. 466. S. verticillata, *Wall. Cat.* n. 8642 (D. *in*

part) G. S. glauca, *Hochst. Pl. Hohenack.* n. 937. Panicum intermedium, *Roth Nov. Sp.* 47; *Thw. Enum.* 361.

Plains and lower hills of INDIA, but not common. HIMALAYA, the PANJAB, to BENGAL, CENTRAL INDIA, and the NILGHIRI HILLS. CEYLON, in shady places, *Thwaites.*—DISTRIB. Temp. and trop. regions.

Undistinguishable from *S. verticillata* except by the barbs of the bristles of the involucel not being reversed. It is probably a common but overlooked grass.

4. **S. verticillata,** *Beauv. Agrost.* 51; panicle subpyramidal or subspiciform, lower involucels in segregate clusters, bristles with reversed barbs, gl. IV minutely rugulose. *Kunth Enum. Pl.* i. 152; *Wall. Cat.* n. 8642 A. B. C. D *in part*, E. F.; *Dalz. & Gibs. Bomb. Fl.* 294; *Aitch. Cat. Panjab Pl.* 162; *Trim. Cat. Ceyl. Pl.* 105; *Duthie Grass. N.W. Ind.* 9, *Fodd. Grass. N. Ind.* 15; *Benth. Fl. Austral.* vii. 494; *Host Gram. Austr.* t. 13; *Reichb. Ic. Fl. Germ.* t. 47; *T. Nees Gen. Fl. Germ. Monoc.* n. 22. S. floribunda, *Spreng. Syst.* i. 305; *Wall. Cat.* n. 8642 E. S. nubica, *Link. Hort. Berol.* i. 220. S. respiciens, *Hochst. ex Miq. Fl. Ind. Bat.* iii. 467. S. verticilliformis, *Dum. Fl. Belg.* 150. S. Rottleri, *Spreng. Syst. Veg.* i. 304; *Steud. Syn. Gram.* 153. ? S. tomentosa, *Kunth Revis. Gram.* i. 47; *Enum. Pl.* i. 157. Panicum Aparine, *Steud.* 52. P. adhaerens, *Forsk. Fl. Ægypt. Arab.* 20. P. asperum, *Lamk. Fl. Fr.* iii. 577. P. floribundum, *Willd. ex Spreng. Syst.* i. 306. P. humile, *Trin. Gram. Panic.* 167. P. italicum, *Ucria, Hort. Reg. Panorm.* 54. P. respiciens, *Hochst. ex Steud. l. c.* 52. P. rude, *Lamk. ex Steud. Nom. Ed.* 1, 589, 772. ? P. tomentosum, *Roxb. Fl. Ind.* i. 301. P. verticillatum, *Linn. Sp. Pl. Ed.* II, 82; *Roxb. Fl. Ind.* i. 301; *Thw. Enum.* 361; *Trin. Sp. Gram. Ic.* t. 202. P. viride, *Desf. Fl. Atlant.* i. 58. Pennisetum verticillatum, *Br. Prodr.* 195. Penn. respiciens, *A. Rich. Tent. Fl. Abyss.* ii. 379.

Throughout INDIA, in shady places, ascending the Himalaya to 6000 ft. CEYLON, not very common.—DISTRIB. Temp. and trop. regions.

Annual. Habit of *S. glauca* but usually more flaccid. *Leaves* sometimes 1 in. broad, scaberulous. *Panicle* 2–7 in. long, erect or curved, green; bristles of involucel one or few, about $\frac{1}{6}$ in. long, flexuous. *Spikelets* $\frac{1}{14}$–12 in.; gl. I about = $\frac{1}{2}$ III; II about = IV which is nearly smooth and shining.

5. **S. viridis,** *Beauv. Agrost.* 51; panicle spiciform cylindric often interrupted, bristles of involucel 3–6 with erect or spreading barbs, gl. IV oblong minutely punctulate or subrugulose. *Kunth Enum.* i. 151; *Aitch. Cat. Panjab. Pl.* 162; *Miq. Fl. Ind. Bat.* iii. 467; *Host Gram. Austr.* ii. t. 14; *Fl. Dan.* t. 352; *Reichb. Ic. Fl. Germ.* t. 47; *Boiss. Fl. Orient.* v. 443; *Benth. Fl. Austral.* vii. 494; *Griseb. Fl. Brit. W. Ind.* 554; *Duthie Grass. N.W. Ind.* 9. S. affinis, *Schult. Mant.* ii. 275. S. ambigua, *Guss. Fl. Sic. Syn.* i. 114. S. chlorantha, *Schur Enum. Pl Transs.* 723. S. decipiens, *C. Schimp. ex Nym. Consp.* 787. S. imberbis & Weinmanni, *Roem. & Schult. Syst.* ii. 891, 490. S. nana, *Dum. Obs. Gram. Belg.* 139. S. penicillata, *Wall. Cat.* n. 8640 D. S. villosa, *Beauv. Agrost.* 51. Panicum bicolor, *Moench. Meth.* 206. P. cynosuroides, *Scop. Fl. Carn. Ed.* II. i. 50. P. humile, *Thunb. ex Trin. Gram. Panic.* 164. P. imberbe, *Poir. Encycl. Suppl.* iv. 272. P. lævigatum, *Lam. Fl. Fr.* iii. 578. P. psilocaulum, *Steud. Syn. Gram.* 50. P. purpurascens, *Opiz. in Flora*, v. 266; *Raddi ex Nees Agrost. Bras.* 240. P. quale Linnæi, *Krock Fl. Siles.* i. 88. P. reclinatum, *Vill. Hist. Pl. Dauph.* ii. 64. P. tejucense, *Nees ex Trin. Gram. Panic.* 166. P. virescens, *Salzm. ex Doell in Mart. Fl. Bras.* ii. II, 157. P. viride, *Linn.*

Syst. Ed. x. 870; *Trin. Sp. Gram. Ic.* t. 203. Pennisetum viride, *Br. Prodr.* 195.

TEMPERATE HIMALAYA and WESTERN TIBET, ascending to 11,000 ft., but not common; rare on the plains of India. NILGHIRI HILLS? (perhaps introduced) *Heyne* (*in Herb. Wallich.* n. 8640 D.).—DISTRIB. Temp. and subtrop. regions of the Old World.

Annual. Habit of *S. glauca*, but spike-like panicle more interrupted; bristles of involucel 3–6, usually short, green or reddish; spikelets larger and more ovoid, and gl. IV nearly smooth. *Gl.* I = about $\frac{1}{2}$ III, acute; II and III subequal, 5–7-nerved.

6. **S. gracillima,** *Hook. f.*; leaves long narrow pubescent, peduncles elongate filiform scaberulous, spike-like panicle elongate rachis capillary villous or pubescent, spikelets minute solitary or in distant shortly pedicelled clusters of 2–3, bristles 1–2 capillary most minutely scaberulous, gl. IV transversely rugulose.

CEYLON, *Gardner* (n. 968).

Whole plant 18 in. high, flaccid, very slender; stems densely tufted. *Leaves* 8–12 by $\frac{1}{6}$ in., finely acuminate, pubescent on both surfaces, base narrow; sheath narrow, mouth villous. *Peduncles* 3–4 in., quite erect, rachis hardly flexuous, pedicels pubescent, bristles erect, often solitary. *Spikelets* subglobose, glabrous, green; gl. I = $\frac{1}{2}$ III, broadly ovate, 3-nerved; II shorter than IV, 5–7-nerved; III as long as IV, subacute, 5-nerved, palea large hyaline; IV pale, coriaceous, acute.—Quite unlike any other species.

7. **S. Forbesiana,** *Hook. f.*; perennial, tall, erect, leaves linear-lanceolate base rounded, panicle narrowly pyramidal, branches short or elongate, bristles few very rigid, spikelets ovoid, glumes strongly nerved, IV minutely transversely rugulose. Setaria macrostachya, *Duthie Grass. N.W. Ind.* 9; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1890) 2; *Herb. Ind. Or. Hook. f. & Thoms.* (*vix H. B. & K.*). Panicum Forbesianum, *Nees ex Steud. Syn. Gram.* 98; *Anderss. in Walp. Ann.* vi. 948.—Panicum, *Wall. Cat.* n. 8704.

TEMPERATE HIMALAYA; from Nepal, *Wallich*, to Mishmi, *Griffith*, ascending to 5000 ft. KHASIA HILLS, alt. 2–4000 ft. The CONCAN, *Lisboa*.

Stems 3–5 ft., tufted, as thick as a duck's quill, quite smooth. *Leaves* 12–18 by $\frac{1}{6}$–$\frac{2}{3}$ in., finely acuminate, flat, nearly smooth except the margins; sheath glabrous or margins and mouth villous; ligule of long silky hairs. *Panicle* 5–12 in., strict, rachis stout, either narrowly pyramidal with erecto-patent lower branches $\frac{1}{4}$–$1\frac{1}{2}$ in. long, or spiciform with short branches. *Involucel* of few green or purple stout bristles, $\frac{1}{2}$ in. long or less. *Spikelets* $\frac{1}{10}$–$\frac{1}{8}$ in., sessile, ovoid, green; gl. I = $\frac{1}{2}$ III, acute or obtuse, 3-nerved; II shorter than IV, orbicular, subacute or obtuse, 9-nerved; III = IV, 7–9-nerved, paleate, male or neuter; IV oblong-ovoid, subacute turgid, white.—Very near *Setaria macrostachya*, H. B. & K. of tropical America and Australia, which differs more in habit than any other characters, having a much denser panicle and the leaves very much narrowed at the base. Both are closely allied to *Panicum plicatum*, but the leaves are not plicate.

UNDETERMINABLE, &c., SPECIES.

S. ? CANESCENS, *Kunth Rev. Gram.* i. 47, *Enum.* i. 157 = Panicum canescens, *Roth Nov. Sp.* 54; *Steud. Syn. Gram.* 54.

S. FIELDINGII, *C. Muell. in Bot. Zeit.* xix. (1861) 323. Not an Indian grass.

S. HIRTA, *Kunth Rev. Gram. & Enum. ll. c.c.* = Panicum hirtum, *Roth l. c.* 46. P. Rothii, *Spreng. Syst.* i. 310. Oplismenus? hirtus, *Roem. & Sch. Syst.* ii. 485. Echinochloa? hirta, *Schult. Mant.* ii. 270.

S. LUXURIANS, *Willd. Herb. ex Spreng. Syst.* i. 305; *Kunth Enum.* i. 156 = Panicum Willdenowii, *Steud. nom. Ed.* II. ii. 265, *Syn. Gram.* 54.

S. ASPERA, *Miq. Fl. Ind. Bat.* iii. 469.

14. **PENNISETUM**, *Pers.*

Annual or perennial grasses. *Infl.* of involucellate spikelets articulate (in Indian species) on the rachis of a simple spike; involucels of unequal scabrid or plumose filiform simple or branched bristles. *Spikelets* 1–3 in each involucel, sessile or very shortly pedicelled, inarticulate at the base and persistent, 1–2-fld., ovoid, glabrous or sparsely hairy. *Glumes* 3–4, I–III hyaline; I smallest or 0, II and III 5-nerved, subequal or II shortest, rarely absent; III paleate or not, male or neuter; IV coriaceous, bisexual or fem., articulate at the base and deciduous. *Stamens* 3, anthers long. *Styles* long, free or connate below. *Grain* free within the gl., oblong, orbicular or pyriform.—Species probably 30–40 of all warm countries.

The synonomy of the species is almost inextricable, and as here given for the Indian species is open to correction in some cases. Dr. Stapf has kindly revised them with me.

Sect. I. PENICILLARIA. *Anther-cells* with bearded tips. *Styles* connate.

P. TYPHOIDEUM, *Rich. in Pers. Syn.* i. 72; *Del. Fl. Ægypt.* 17, t. 8, f. 3; *Trin. Diss.* ii. 71 (typhoides); *Boiss. Fl. Orient.* v. 447; *Trim. Cat. Ceyl. Pl.* 106; *Duthie Grass. N.W. Ind.* 11, *Field & Gard. Crops*, 30, t. 71, *Fodd. Grass. N. Ind.* 18; *Lisboa, in Journ. Bomb. Nat. Hist. Soc.* v. (1891) 339. P. alopecuroides, *Spreng. Syst.* i. 303 (*in part*). P. cereale, *Trin. in Mem. Acad. Petersb. Ser.* vi. iii. II (1835) 185. P. cylindricum, *Sw. ex Trin. Diss.* ii. 70. P. giganteum, *Tenore ex Steud. Nom. Ed.* II. ii. 297. P. Linnaei, *Kunth Revis. Gram.* i. 49. P. megastachyum, *Steud. Syn. Gram.* 108. P. spicatum, *Roem. & Sch. Syst.* ii. 499. P. violaceum, *Rich. in Pers. Syn.* i. 72. Penicillaria alopecuroides, *Sweet Hort. Brit. Ed.* I. 440; *A. Braun Ind. Sem. Hort. Berol.* (1855), *App.* 25. Penic. ciliata, *Willd. Enum. Hort. Berol.* 1037. Penic. chinensis, *Nees ex A. Br. l. c.* 26. Penic. cylindrica, *Roem. & Sch. l. c.* 498 (*non Nees*). Penic. fallax, *Fig. & Not. in Mem. Acad. Tor.* II, xii. (1852) 371. Penic. involucrata, *Schult. Mant.* ii. 283; *Schlecht. in Linnæa,* xxv. (1852), 565. Penic. nigritarum & Sieberiana, *Schlecht. l. c.* 561, 565. Penic. Plukeneti, *Link Enum. Hort. Berol.* i. 221; *Nees Fl. Afr. Austr.* 72. Penic. Roxburghii, *A. Br. & Bouché Ind. Sem. Hort. Berol. l. c.* 26. Penic. typhoidea & Raddiana, *Fig. & Not. l. c.* 371, 373. Penic. solitaria, *Stokes Bot Mat. Med.* i. 129. Penic. spicata, *Willd. l. c.*; *Beauv. Agrost.* 58, t. 13, f. 4; *Wall. Cat.* n. 8644; *Anderss. in Walp. Ann.* vi. 966; *Kunth Enum. Pl.* i. 165, *Suppl.* 120, t. 11, f. 1; *Jacq. Eclog. Gram.* t. 17; *Aitchis. Cat. Panjab. Pl.* 163. Panicum spicatum, *Roxb. Fl. Ind.* i. 283. Pan. americanum, *Linn. Sp. Pl.* 56. Cenchrus alopecuroides, *Thunb. Prodr. Fl. Cap.* 24. C paniceus, *Heyne ex Wall. Cat.* n. 8650. C. spicatus, *Cav. Descr.* 304, 614. Holcus paniciformis, *Roxb. Ic. ined.* n. 896. H. racemosus, *Forsk. Fl. Æg. Arab.* 175. H. spicatus, *Linn. Syst. Ed.* x. 1305; *Grah. Cat. Bomb. Pl.* 238; *Dalz. & Gibs. Bomb. Fl. Suppl.* 99. Alopecurus indicus, *Linn. Syst. Ed Murray* 92 (*excl. Syn. Pluk.*). A typhoides, *Burm. f. Fl. Ind.* 27.—Penicillaria, *Wall. Cat.* n. 8644, 8650.

Throughout the hotter parts of INDIA, cultivated or an escape; also all Africa and S. Europe.

Annual. *Stem* 3–6 ft., erect, simple, or branched from the root, slender or stout, sometimes as thick as the middle finger at the base, solid, leafy, upper nodes glabrous or woolly, lower rooting. *Leaves* 1-3 ft. by ¼–2 in., lanceolate, spreading and drooping, flat, more or less hairy; midrib stout or slender; sheath rather inflated; ligule of hairs. *Peduncle* more or less woolly below the spike. *Spike* 6–12 in. by ¼–1½ in. diam., erect, cylindric, dense-fld.; rachis hairy or woolly, branchlets 1–8-fld., concealed by the densely packed spikelets; bristles of involucel more or less unilateral, as long as the spikelets or longer, scabrid and ciliate, white or colrd. *Spikelets* ⅛–⅕ in., usually solitary in the involucel, oblong ovate or ovate-lanceolate, pedicelled, pedicel ciliate; gl. I minute or 0, ½-orbicular or subquadrate, 1–3-nerved; II very variable in length, sometimes absent, usually ⅙–½ IV, subquadrate, truncate, obtuse or retuse 3-nerved, very rarely as long as IV and coriaceous; III ovate-oblong, obtuse or truncate and apiculate, 5-nerved, epaleate or paleate, and male or neuter, rarely bisexual; IV coriaceous or herbaceous, ovate, acute, 5–7-nerved; palea very broad, truncate, ciliate at the tip and dorsally, nerves 2 approximate excurrent. *Lodicules* 0. *Anthers* linear. *Grain* oblong, obovoid, or pyriform, smooth, free, and top exposed.—Only known in cultivation or as an escape, and it is difficult to say whether the many known forms originated in one or more species. Alph. De Candolle unfortunately does not include it in his "Origine des Plantes Cultivées." Its abundance throughout Africa would point to that continent as its source. There are very great differences in the number, sizes, and shapes of the glumes, of I and II especially, which are not unfrequently both absent. The materials are not sufficient to enable me to attempt a classification of the numerous forms cultivated or growing as escapes in India. To do this would require an exhaustive examination of the African forms, of which there are legions. I can only refer to Schlechtendahl's paper in the Linnæa, xxv. (1852) 530, to Kornicke & Werner's Handb. der Getreidebaues (i. 291), and to Braun's descriptions of 22 cultivated forms, chiefly African, in Walp. Ann. vi. 961. Roxburgh alludes to five varieties as cultivated in India, but does not distinguish them. The following five are selected as noteworthy.

1. Tall, very stout, leaves broad, spike very stout (Typha-like), 8–12 by 1–1½ in. diam., involucels on long ciliate pedicels with sometimes a superposed one, bristles much longer than the spikelets, dark brown; spikelets clustered in the involucels or chiefly in the upper involucel if present, ovoid or oblong, gl. I minute semilunar or 0, II 0 or like I or larger and quadrate truncate 3-lobed 3-nerved, III = IV 5-nerved, paleate, palea very broad quadrate entire or 2-fid. 2-nerved dorsally villous, IV 7-nerved emarginate apiculate, palea as in III.—The largest cult. form. *Wall. Cat.* n. 8644.

2. Spike cylindric 7 by ⅔ in., involucels shortly pedicelled, bristles shorter than the spikelet pale, spikelets 1–3 ⅒ in., gl. I and II minute semilunar, III broadly oblong paleate and 3-nerved, palea dorsally villous, IV 7-nerved nerves and margins ciliate, palea as in III.—N.W. India, *Royle.*

3. Tall, erect, spike 4–5 in., stem densely villous towards the top, involucels shortly pedicelled, bristles longer than the spikelets pale or purplish, spikelets subsolitary ⅙ in. elliptic-lanceolate, gls. 3, I 0, II = ½–⅔ IV oblong truncate 5-nerved paleate, III ovate cuspidate 5-nerved.—A very common cult. form. Lahore, *Stewart.*—Alopecurus indicus, *Hb. Heyne.*

4. Stem slender 12–18 in., leaves very narrow, spike 1 in. rather slender, involucels shortly pedicelled, bristles longer than the spikelet, pale, spikelets subsolitary ovate, gls. 3, I minute semilunar, II = ½ III subquadrate 3-nerved, III ovate tip truncate and mucronate strongly 5-nerved, nerves and tip ciliate.—Monghyr.

5. Spike 4–7 in., involucels shortly pedicelled, bristles much longer than the spikelets very pale, spikelets ⅛–¼ in. narrowly lanceolate, glumes 3 all membranous, I minute, II = ⅓ III oblong truncate 3-nerved, III elliptic-lanceolate strongly 3-nerved tip emarginate mucronate, palea narrow oblong-lanceolate smooth, anther cells most minutely bearded, ovary produced into a flexuous compressed twisted

awn an inch long. Penicillaria cylindrica, *R. & S.*; *Wight Cat.* n. 1662.—A diseased form.

Sect. II. PENNISETUM proper. Anther-cells not bearded.

* Bristles of involucel all free to the base, slender.

† *Bristles branched.*

1. **P. lanatum,** *Klotzsch in Bot. Erg. Waldem. Reise,* 65, t. 93. P. sericeum, *Munro mss.* P. nepalense, *Griseb. in Goett. Nachr.* (1868) 302 (*non Spreng.*)

WESTERN HIMALAYA, alt. 7–9000 ft.; from Kashmir to Garwhal, and WESTERN TIBET, *Jacquemont,* &c.

Perennial; rootstock often stout, woody, creeping and branching; stem 1–3 ft. *Leaves* 6–18 by $\frac{1}{6}$–$\frac{1}{2}$ in., flat, glabrous hairy or silkily villous. *Spikes* 2–5 in., $\frac{1}{2}$–$\frac{2}{3}$ in. diam., pale green; peduncle and rachis more or less villous; involucels pedicelled, densely imbricate. *Spikelets* $\frac{1}{5}$ in., solitary in the involucels, rather shorter than the scabrid and sparsely ciliate branching bristles; gl. I = $\frac{1}{4}$ III, ovate, acute; II = $\frac{1}{2}$ IV, oblong, obtuse, 3-nerved, III and IV lanceolate, acuminate, 5-nerved.

†† *Bristles unbranched, scaberulous, not or sparingly ciliate.*

2. **P. Alopecuros,** *Steud. Syn. Gram.* 102 (*non Jacq.*); peduncle and rachis of spike glabrous, spikelets $\frac{1}{3}$ in. solitary narrowly lanceolate, gl. I minute, II = $\frac{1}{3}$ III oblong obtuse 1–3-nerved, III lanceolate acuminate 7–11-nerved, IV subulate-lanceolate 5-nerved. *Duthie Grass. N.W. Ind.* 10; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1890) 338. P. Hohenackeri, *Hochst. ex Steud. l. c.* 103. P. aureum, *Dalz. & Gibs. Bomb. Fl.* 294; ? *Link. Hort. Berol.* i. 215. Gymnothrix Alopecuros, *Nees in Wight Cat.* n. 1663; *Steud. l. c.* G. cenchroides, *Roem. & Sch. Syst.* ii. 499; *Kunth Enum. Pl.* i. 155; *Wight ex Steud Syn. Gram.* 102. Cenchrus hordeiformis, *Herb. Rottl. ex Steud. l. c.* 102 (*non Thunb.*). Panicum helvolum, *Herb. Madr. ex Wall. Cat.* n. 8652 A. Pan. hordeiforme, *Thunb. Fl. Japon.* 46 (*partly*). —Gymnothrix ? *Wall. Cat.* n. 8652.

RAJPUTANA; swamps on Mt. Abu, *Duthie.* The CONCAN, *Stocks,* &c. NILGHIRI HILLS, alt. 5500 ft.

Perennial. *Stems* 2–3 ft., stout, erect, densely tufted below, subdistichously branching upwards; branches strict, erect. *Leaves* 12–18 by $\frac{1}{10}$–$\frac{1}{6}$ in., coriaceous, convolute, glabrous, base and flattened distichous sheath often villous; ligule of hairs. *Spikes* 5–7 in., usually pale green; rachis flexuous; involucels very shortly pedicelled; bristles few, very unequal, nearly straight, longest 2–3 times as long as the spikelet, bases quite free; gl. I suborbicular.—Habit of *P. compressum.* The *P. aureum* of the Bombay Flora is, I do not doubt, *P. Alopecuros,* but what *P. aureum* of Link may be is uncertain.

3. **P. flaccidum,** *Griseb. in Goett. Nachr.* (1868) 86; peduncle and rachis of spike glabrous, spikelets $\frac{1}{6}$ in. solitary ovate-lanceolate, gl. I very small orbicular or 0, II = $\frac{2}{3}$ IV lanceolate 5-nerved, III and IV ovate-lanceolate subsetaceously acuminate 5-nerved. *Duthie Grass. N.W. Ind.* 10. P. mongolicum, *Franch. mss.* Gymnothrix flaccida, *Munro ex Aitchis. Cat. Panjab. Pl.* 163.

Temperate and alpine HIMALAYA, alt. 5–11,000 ft.; from Kashmir to W. Nepal and WESTERN TIBET.—DISTRIB. Affghan., Central Asia.

Perennial. *Stem* 6–24 in., densely tufted, creeping below, branching at the base only, slender above. *Leaves* 5–10 by $\frac{1}{6}$–$\frac{1}{4}$ in., flat, glabrous or sparsely hairy, base contracted, mouth of the often ciliate sheath bearded. *Spikes* 2–6 in., rather slender, very pale, often flexuous; involucels subsessile; bristles nearly straight or flexuous, one often very much the longest, all free to the base.

4. **P. compressum,** *Br. Prodr.* 193; tip of peduncle and rachis of spike more or less villous, spikelets ¼ in. solitary lanceolate, gl. I minute or 0, II = ⅓–½ III ovate-lanceolate acute or obtuse 1-nerved, III ovate acuminate 5–7-nerved epaleate, IV = III 5-nerved. *Schrad. in Linnæa,* xii. (1838) 431; *Benth. Fl. Austral.* vii. 495; *Steud. Syn. Gram.* 102. P. alopecuroides, *Spreng. Syst.* i. 303 (*in part*). P. chinense, *Steud. l. c.* 108. P. cynosuroides, *Wall. Cat.* n. 8653. P. hordeiforme, *Spreng. Syst.* i. 302. P. nigricans, *Trin. ex Steud. Nom. Ed.* II. ii. 297, *Syn. Gram.* 103. P. japonicum, *Trin. in Spreng. Neue Entdeck.* ii. 76, *Diss.* ii. 63, *Pan. Gen.* 88, *Sp. Gram. Ic.* t. 19; *Franch. et Savat. Enum. Pl. Jap.* ii. 164. Penicillaria chinensis, *Nees ex Steud. l. c.* Gymnothrix compressa, *Brongn. Voy. Coq. Bot.* 103. ? G. cenchroides, *Roem. & Sch.* i. 499 (*in part*). G. hordeiformis, *Nees in Linnæa,* vii. (1832) 276. G. japonica, *Kunth Enum. Pl.* i. 158. G. nigricans, *Presl Rel. Haenk.* i. 315. G. purpurascens, *Sw. ex Trin. Diss.* ii. 64, *Pan. Gen. l. c.* ? Cenchrus hordeiformis, *Thunb. Prodr. Pl. Cap.* 24. C. purpurascens, *Thunb. in Trans. Linn. Soc.* ii. (1794) 329. Setaria compressa, *Kunth Revis. Gram.* 46, *Enum.* i. 150. Panicum alopecuroides, *Linn. Sp. Pl.* 55. P. aristidoides, *Willd. ex Spreng. Syst.* i. 302. Pan. asperum, *Link. Enum. Hort. Berol.* i. 75 (*non Sch.?*). Pan. hordeiforme, *Thunb. Fl. Jap.* 46, t. 9 (*excl. cit. Afr.*). ? Alopecurus hordeiformis, *Linn. Sp. Pl.* 60.—Gymnothrix, *Wall. Cat.* n. 8653.

BURMA; Taong Dong, *Wallich*; Shan Hills, alt. 4000 ft., *Manders.*—DISTRIB. China, Japan, Tonkin, Australia.

Perennial; stem 1–2 ft., densely tufted. *Leaves* 12–18 in., very narrow, convolute, silkily villous towards the base; sheath glabrous or ciliate; ligule obscure. *Spikes* 2–4 in., purplish in Indian specimens; involucels pedicelled, pedicels villous; bristles few, very unequal, one or two much longer than the rest and an inch long, all free at the base.—Trinius refers to *P. compressum,* the *Alopecurus hordeiformis,* Linn. (*Cenchrus hordeiformis,* Thunb., *Gymnothrix cenchroides,* R. & S.), which appear to me to be more probably *P. Alopecurus.*

5. **P. dichotomum,** *Delile Fl. Ægypt.* 159, t. 8, f. 1; stem dichotomously branched rigid, peduncle and rachis glabrous, spikelets ⅓ in. usually solitary lanceolate, gl. I = ⅔ III ovate-lanceolate acuminate, II = III lanceolate acuminate 5–7-nerved, III = IV both 5-nerved. *Trin. Diss.* ii. 66, *Pan. Gen.* 94; *Kunth Enum. Pl.* i. 161, *Suppl.* 110; *Steud. Syn. Gram.* 105; *Boiss. Fl. Orient.* v. 444; *Aitchis. Cat. Panjab. Pl.* 162; *Duthie Grass. N.W. Ind.* 10. P. phalaroides, *Schult. Mant.* ii. 147; *Nees Agrost. Bras.* 283. Gymnothrix longiglumis, *Munro in Cat. Griff. &c. Pl.* 56 (*name*). Cenchrus ramosissimus, *Poir. Encycl.* vi. 51; *Dalz. & Gibs. Bomb. Fl.* 294. Phalaris setacea, *Forsk. Fl. Ægypt. Arab.* 20. Panicum dichotomum, *Forsk. l. c.*; *Steud. l. c.* 105.

PANJAB and the N.W. PROVINCES (fid. *Duthie*). PESHAWUR, *Aitchison.* SIND and GUZERAT; on sand hills, *Stocks.*—DISTRIB. Affghan. and westwards to N. Africa.

Perennial, quite glabrous, bushy. *Stems* distantly branched; internodes long, rigid, polished; branches sometimes fascicled. *Leaves* short, rigid, convolute. *Spikes* 3–5 in., cylindric, pale, nearly white; rachis scabrid; bristles of sessile involucel, very many, slender, flexuous, pale, the longer nearly twice as long as the spikelet, inner stouter somewhat plumose, all free at the base.—I have seen no specimens from the Panjab or the N.W. Provinces.

6. **P. parviflorum,** *Trin. Diss.* ii. 65, *Sp. Gram. Ic.* t. 288; annual, erect, peduncle and rachis glabrous, spike very narrow purple, spikelets $\frac{1}{8}$ in. solitary narrowly lanceolate, gl. I minute suborbicular, II longest truncate cuspidate 5-nerved, III = $\frac{3}{4}$ II truncate toothed 5-nerved paleate male, IV = III lanceolate obtuse nerveless shining. *Steud. Syn. Gram.* 103. P. imberbe, *Edgew. in Journ. Linn. Soc.* xxi. (1852) 181 (*name*); *Steud. Syn. Gram.* 104; *Duthie Grass. N.W. Ind.* 10, *Indig. Fodd. Grass.* t. 50, *Fodd. Grass. N. Ind.* 18. Gymnothrix hordeoides, *Kunth Revis. Gram.* i. 48, *Enum.* i. 60. Panicum hordeoides, *Poir. in Lam. Illust.* i. 170. Alopecurus rubicundus, *Herb. Ham. ex Wall. Cat.* n. 8646 B.

RAJPUTANA; at Oodeypore, *Wingate* (*Herb Duthie*). BEHAR, on Parusnath, and at Hazaribagh, *Clarke.*—DISTRIB. tropical Africa.

Stem 2–3 ft., branching upwards, leafy, branches erect. *Leaves* 4–10 by $\frac{1}{6}$–$\frac{1}{3}$ in., flat, base and mouth of sheath ciliate. *Spikes* 3–5 by $\frac{1}{4}$–$\frac{1}{3}$ in. diam.; rachis very slender, strict, as it were crenate from the projections between the close-set spikelets; bristles of sessile involucel very slender, quite free, a few 4–6 times as long as the spikelet.—Closely allied to *P. setosa.* Probably not indigenous in India.

†† *Bristles unbranched, inner copiously ciliate or lanate.*

7. **P. orientale,** *Rich. in Pers. Syn.* i. 72; perennial, rachis of spike hairy, spikelets 2–5 in each pedicelled involucel $\frac{1}{6}$ in. lanceolate, gl. I = III ovate or oblong nerveless, II shorter than IV ovate-lanceolate acuminate 3-nerved, III longest aristately acuminate 5-nerved, IV oblong-lanceolate aristate shining. *Trin. Diss.* ii. 69; *Kunth Enum. Pl.* i. 162, ii. 117; *Griseb. in Ledeb. Fl. Ross.* iv. 472; *Coss. & Dur. Fl. Alger.* ii. 39; *Boiss. Fl. Orient.* v. 445; *Duthie Grass. N.W. Ind.* 10. P. araneosum, *Edgew. in Journ. Beng. As. Soc.* xxi. (1852), 180; *Steud. Syn. Gram.* 105; *Aitchis. Cat. Panjab. Pl.* 162; *Duthie Grass. N.W. Ind.* 10. P. asperifolium, *Kunth Revis. Gram.* i. 49, *Enum. Pl. l. c.* P. elatum, *Hochst. ex Steud. Nom. Ed.* II. ii. 297. P. fasciculatum, *Trin. in Mem. Acad. Petersb. Ser.* 6, iii. II. (1835) 181. P. Griffithii, *Munro Cat. Pl. Griff. &c. ined.* 56. P. macrostachyum, *Fresen. in Mus. Senkenb.* ii. 135 (*non Trin.*). P. persicum, *Boiss. & Buhse in Nov. Mem. Soc. Nat. Mosc.* xii. (1860) 232. P. phalariforme, *Steud. Syn. Gram.* 106 (*ex descript.*). P. Ruppellii, *Steud. Nom. l. c.* 298. P. sinaicum, *Decne in Ann. Sc. Nat. Ser.* 2, ii. (1834) 11; *Aitchis. l. c. Duthie l. c.* P. tenue & variabile, *Fig. & Notar. in Mem. Accad. Torin Ser.* 2, xii. (1852), 246, 248. P. tiberiadis, *Boiss. Diagn. Ser.* I. xiii. 43. Cenchrus asperifolius, *Desf. Fl. Atlant.* ii. 388. C. hordeiformis, *Pers. l. c.* 71 (*non Lamk.*). C. orientalis, *Willd. ex Trin. Diss.* ii. 69; *Kunth l. c.* 162. Panicum orientale, *Willd. Enum. Hort. Berol.* ii. 1031.

WESTERN HIMALAYA, from Kashmir to Kumaon, alt. 3–6000 ft. The PANJAB, SINDH, the CONCAN and BEHAR (on Parusnath, alt. 2000 ft., *Clarke*).—DISTRIB. Westward to Asia Minor and N. Afr.

Stem 2–6 ft., erect or ascending from a densely tufted often stout creeping branching rootstock. *Leaves* 1–2 ft. by $\frac{1}{6}$–$\frac{1}{2}$ in., narrowly linear, flat or subconvolute, glabrous or hairy. *Spike* 5–16 in.; rachis stout, subterete, not grooved or notched; pedicels of involucels hispid; bristles $\frac{2}{3}$–$\frac{3}{4}$ in., all very slender, flexuous, often purplish, very unequal, villous below, quite free at the base; spikelets on the short branches of a hispid pedicel, outer often imperfect.

Var. *triflorum,* Stapf mss.; spike elongate dense-flowered. P. triflorum, *Nees in Herb. Royle*; *Steud. l. c.* 107.

8. **P. pedicellatum,** *Trin. in Mem. Acad. Petersb. Ser.* vi. iii.

II. (1835) 184; annual, spikes dense-fld., rachis glabrous, spikelets $\frac{1}{8}$ in. solitary or geminate shortly pedicelled in the sessile involucels, bristles densely villous, gl. I very small oblong woolly, II broadly oblong apiculate 7-nerved, III = IV truncate 5-nerved tip toothed, IV lanceolate acute smooth shining. P. lanuginosum, *Hochst. in Flora* xxv. (1842), *Beibl.* i. 133; *A. Rich. Tent. Fl. Abyss.* ii. 385; *Steud. Syn. Gram.* 107; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1891) 339. P. amoenum, *A. Rich. l. c.* 386. P. lanatum, *Herb. Ham. ex Wall. Cat.* n. 8647. P. implicatum, *Steud. l. c.* 107 (*ex descr.*). P. intertextum, *Schlecht. in Bot. Zeit.* ix. (1851) 878. Eriochaeta densiflora, nervosa & secundiflora, *Fig. et De Not. in Mem. Acc. Torin.* Ser. II. xiv. (1854) 375–378.—Pennisetum, *Wall. Cat. l. c.*

RAJPOOTANA and BANDA; on Mt. Abu, *Duthie*. BEHAR, at Monghyr, *Hamilton*; Hazaribagh and on Parusnath, *Clarke*.—DISTRIB. Afr. trop.

Stems 1–3 ft., branched from the base and above, leafy. *Leaves* 6–10 by $\frac{1}{6}$–$\frac{1}{3}$ in., flat, flaccid, glabrous or sparsely hairy. *Spikes* 2–5 in.; rachis notched; involucels quite sessile; outer bristles short, inner $\frac{1}{3}$ in. long, densely villous below the middle, flexuous, very unequal, pale. *Spikelets* with the pedicel and often the base of the lower glumes woolly; tip of gl. IV hispid.

9. **P. setosum,** *Rich. in Pers. Syn.* ii. 729 (*excl. syn.*); annual, peduncle and rachis of spike glabrous, spikelets $\frac{1}{10}$ in. solitary in the sessile involucels, bristles $\frac{1}{4}$–$\frac{1}{3}$ in. sparsely ciliate, gl. I minute or 0, II oblong cuspidate 5-nerved, III shorter than II oblong truncate 3-toothed 5-nerved, IV ovoid tip ciliate. *Trin. Diss.* ii. 66, *Pan. Gen.* 95, *Sp. Gram. Ic.* t. 20; *Nees in Mart. Fl. Bras.* ii. II. 305; *Griseb. Fl. Brit. W. Ind.* 555; *Baker Fl. Maurit.* 441. P. barbatum, *Schult. Mant.* ii. 147; *Nees Agrost. Bras.* 283; *Kunth Enum. Pl.* i. 163; *Steud. Syn. Gram.* 108. P. breve, *Nees l. c.* 281. P. ciliatum, *Parl. in Hook. Niger Flora,* 184. P. ciliares, *Herb. Ham. ex Wall. Cat.* n. 8640 A. P. dasystachum, *Desv. Opusc.* (*ex descr.*) 76. P. elegans, *Nees ex Steud. l. c.* 105. P. flavescens, *Presl Rel. Hænk.* i. 316 (*ex descr.*). P. hirsutum, *Nees Agrost. Bras.* 284. P. holcoides, *Schult. l. c.* 148; *Duthie Grass. N. W. Ind.* 10, *Indig. Fodd. Grass.* t. 49, *Fodd. Grass. N. Ind.* 17. P. gracile, *Benth. in Hook. Niger Fl.* 564. P. intertextum, *Herb. Ham. ex Wall. Cat.* 8648. P. myurus, *Parl. in Atti Riun. Ott. Sc. Ital.* 586. P. pallidum, *Nees Agrost. Bras.* 185 (*ex descr.*). P. polystachyum, *Schult. l. c.* 146; *Nees in Hook. Niger Fl.* 563. P. purpurascens, *H.B. & K. Nov. Gen. & Sp.* i. 113; *Nees l. c.* 282; *Kunth l. c.* 160. P. Richardi, *Kunth Revis. Gram.* i. 49, 255, t. 39, *Enum.* 161. P. Sieberi, *Kunth Revis.* i. 49 (*ex parte*) ii. 877. P. tenuispiculatum, *Steud. l. c.* 107 (*ex descr.*) P. triticoides, *Roem. & Sch. Syst.* ii. 877. P. uniflorum, *H.B. & K. l. c.* t. 34. P. violaceum, *Hort. ex Trin. Diss.* ii. 67 (*non Rich.*). Gymnothrix Thouarii, *Herb. Ham. ex Wall. Cat.* n. 8645 A. (*non Beauv.*). Penicillaria ciliaris, *Herb. Ham. l. c.* n. 8646 A. Panicum Alopecuros, *Lamk. Ill.* i. 169; *Encycl.* iv. 739. Pan. barbatum, *Roxb. Fl. Ind.* i. 282; *Wall. Cat.* n. 8646 C. Pan. cenchroides, *Rich. in Act. Soc. Hist. Nat. Par.* i. (1792) 106. Pan. densispica, *Poir. Encycl. Suppl.* iv. 273. Pan. holcoides, *Roxb. l. c.* 285, *Ic. ined.* n. 784. Pan. polystachyum, *Schult. Mant.* ii. 146. Pan. triticoides, *Poir. l. c.* 274. Setaria cenchroides, *Roem. & Sch. Syst.* ii. 495. Cenchrus setosus, *Sw. Prodr. Veg. Ind. Occ.* 26 (*excl. syn.*). —Penniseti sp., *Wall. Cat.* n. 8646, 8648.

UPPER GANGETIC PLAIN, at Cawnpore (*Herb. Wight*). The CIRCARS; in cultivated ground among the mts., *Roxburgh*. BENGAL, BEHAR, and CHOTA NAGPORE. —DISTRIB. Afric. and Amer. trop.

Stem erect, often stout and fastigiately branched at the nodes, green or purplish. *Leaves* 6–10 by ¼–¾ in., flat, flaccid, glabrous or hairy. *Spikes* few or many, 2–4 in., usually purplish brown; rachis slender, deeply pitted; involucels close-set, at length spreading; bristles laxly but copiously ciliate below the middle, all slender and free at the base; gl. II. suddenly or gradually cuspidate; III with two obtuse lateral teeth at the tip and an acute median. *Styles* free at the base.—Possibly not indigenous in India.

10. **P. borbonicum,** *Kunth Revis. Gram.* i. 259, t. 41, *Enum. Pl.* i. 162, *Suppl.* 118; habit, &c. of *P. setosum*, but spikes longer 1 in. diam. across the bristles, spikelets ⅙ in., gl. II much longer than III acuminate. Gymnothrix Thuarii, *Beauv. Agrost.* 59. G. Thouarii, *Steud. Nom. Ed.* II.; 386. Panicum longisetum, *Poir. Encyc.* iv. 275 (*Excl. Syn. Beauv.*).—Pennisetum sp. *Wall. Cat.* n. 8645.

BENGAL; at Serampore, *Carey*; margins of fields, &c., *Kurz.* SILHET, *Griffith.* —DISTRIB. Bourbon.

A very doubtful native of India.

** Inner bristles of involucel dilated below, their bases confluent in a coriaceous disk.

11. **P. cenchroides,** *Rich. in Pers. Syn.* i. 72; peduncle and rachis of spike glabrous, spikelets ⅙ in. 1–3 in each pedicelled involucel, gl. I = ½ III ovate acuminate nerveless, II = ½ IV ovate acuminate 1-nerved, III oblong truncate 5-nerved, IV lanceolate truncate or cuspidate. *Beauv. Agrost.* 59, t. 13, f. 5; *Trin. Fund. Agrost.* 171, t. xv., *Diss.* ii. 69, *Pan. Gen.* 93; *Nees Agrost. Bras.* 184, *Fl. Afr. Austr.* 70, *in Linnæa*, vii. 162; *Kunth Enum. Pl.* i. 162; *Suppl.* 119; *Parlat. Fl. Ital.* i. 108, *in Webb. & Berth. Phyt. Canar.* iii. III. 380, t. 244; *Steud. Syn. Gram.* 105; *Boiss. Fl. Orient.* v. 445; *Baker Fl. Maurit.* 441; *Wall. Cat.* n. 8649; *Aitchis. Cat. Panjab. Pl.* 162; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* v. (1891) 338; *Duthie Grass. N.W. Ind.* 10, *Indig. Fodd. Grass.* t. 12, 13, *Fodd. Grass. N. Ind.* 17. P. ciliare, *Link. Hort. Berol.* i. 213; *Coss. & Dur. Fl. Alger.* ii. 38. P. incomptum, *Nees ex Steud. l. c.* 105 (*ex descr.*). P. distylum, *Guss. Ind. Sem. Hort. Bocc.* 8, *Fl. Sic. Prodr.* i. 12; *Bertol. Fl. Ital.* i. 393. P. petreum, *Steud. l. c.* 106. ?P. Vahlii, *Kunth Revis.* i. 49. P. rufescens, *Spreng. Syst.* i. 302; *Kunth l. l. c. c.* 162, ii. 117. *Steud. l. c.* Cenchrus Anjania, *Herb. Ham. ex Wall. Cat.* n. 8649 B. C. ciliaris, *Linn. Sp. Pl.* 302; *Desf. Fl. Atlant.* ii. 387. C. digynus, *Schreb. ex Boiss. l. c.* 449. C. longifolius, *Hochst. ex Steud. l. c.* C. mutabilis, *Wight. Herb.* C. pennisetiformis, *Hochst. et Steud. ex Boiss. l. c.* 448. C. rufescens, *Desf. l. c.* 388. Panicum vulpinum, *Willd. Enum. Hort. Berol.* 1031.

Plains and low hills throughout WESTERN INDIA, from Kashmir to the Upper Gangetic plain and southwd. (Absent from Ceylon.)—DISTRIB. Westwd. to Sicily, trop. Afr. and the Canaries.

Stems tufted, 6–18 in., erect or decumbent and much branched from the base, stout or slender, leafy, or ascending from a branching often nodose rootstock, the sheaths of which are often woolly. *Leaves* 6–10 by ⅛–⅙ in., glabrous hairy or villous. *Spikes* 1½–4 in., pale, rarely purplish; peduncle often flexuous; rachis scaberulous; involucels subsessile, outer bristles slender, squarrosely spreading; inner twice as long as the spikelets, thickened and ciliate below, filiform flexuous and scabrid above. *Spikelets* 3, polygamous, gl. III male or sometimes fem. with an obcordate ovary; IV coriaceous; styles nearly free at the base.

Var. *echinoides*; inner bristles of the involucel shortly connate above the basal disk. Cenchrus echinoides, *Wight ex Steud. Nom. Ed.* II. i. 317; *Syn. Gram.* 109.

C. bulbosus, *Fresen. ex Steud. l. c.* C. pennisetiformis, *Hochst. ex Steud. l. c.* 109. C. setigerus, *Herb. Heyne ex Wall. Cat.* n. 8649 A.; *Aitchis. Cat. Panjab. Pl.* 162. C. lappaceus, *Tausch in Flora* XX. (1837) 57.—The Panjab, Upper Gangetic Plain, and Deccan Peninsula, Arabia, Africa, Madeira. A nearer approach to *Cenchrus* than *P. cenchroides*, but at once distinguishable from that genus by the filiform tips of the bristles of the involucel. It occurs here and there in the same areas as *P. cenchroides*, and passes into it.

12. **P. Prieurii,** *Kunth Revis. Gram.* ii. 411, t. 119, *Enum. Pl.* i. 162, *Suppl.* 119; habit of *P. cenchroides*, but involucel nearly twice as large, the longer bristles ¾ in. long, the spikelets one or two sessile and gl. I minute or 0. *Steud. Syn. Gram.* 105. Cenchrus macrostachyus, *Hochst. ex Steud. l. c.* 109.

The PANJAB; *Drummond* (*Herb. Duthie*). RAJPUTANA; at Jeypoor, *Duthie.*—DISTRIB. Afr. trop.

Quite glabrous. *Stems* tall, slender, erect, or short prostrate stout and much branched, with geniculate leafy branches. *Leaves* 1–8 in., rigid, narrow with filiform tips, scaberulous; sheath inflated; ligule of very fine hairs. *Spikes* on long exserted or short included peduncles, 2–4 in. long, 1½ in. diam. across the bristles, very pale; rachis slender, geniculately flexuous, compressed, quite smooth; involucels subsessile; bristles 1 in. flexuous, dilated and ciliate below. *Spikelets* ⅙ in.; gl. I 0; II = III both ovate-lanceolate, cuspidately acuminate, 5-nerved; IV like III, but rather longer, 5-nerved; palea like the gl., 2-nerved. *Anthers* linear. *Grain* broadly orbicular-oblong, cuspidate, flattened.

DOUBTFUL SPECIES.

P. NEPALENSE, *Spreng. Syst.* i. 303 (to which Grisebach refers *lanatum*, Kl.) differs according to the description from *lanatum* in the coloured setæ, which are not described as branched, and in the habitat, Nepal, which is far to the east of the range of *lanatum*. Sprengel's specimen is in all probability from Wallich, who alone had distributed plants from Nepal at that time.

15. CENCHRUS, *Linn.*

Characters of *Pennisetum*, but involucels composed of subulate hard spines without filiform tips, connate below into a short coriaceous cup, which is surrounded by erect or squarrose bristles.—Species few, tropical and subtropical.

1. **C. biflorus,** *Roxb. Fl. Ind.* i. 233; involucels rounded at the base, inner spines subulate-lanceolate erect puberulous dorsally flat with thickened margins, outer short or long erect or sub-squarrose. *Kunth Enum. Pl.* i. 167; *Steud. Syn. Gram.* 110; *Wight Cat.* n. 1664; *Dalz. & Gibs. Bomb. Fl.* 294; *Aitchis. Cat. Panjab. Pl.* 163 (triflorus); *Duthie Grass. N.W. Ind.* 9. C. bulbifer, *Hochst. ex Boiss. Fl. Orient.* v. 448. C. echinatus, *Wall. Cat.* n. 8854 B.C. C. montanus, *Nees in Royle Ill. Himal. Pl.* 416 (*name*); *Steud. l. c.* 111; *Boiss. l. c. Aitchis. l. c.*; *Duthie Grass. N.W. Ind.* 9, *Indig. Fodd. Grass.* t. 48, *Fodd. Grass. N. Ind.* 16. C. quinquevalvis, *Herb. Ham. ex Wall. l. c.* C. C. Schimperi, *Hochst. ex Steud. Nom. Ed.* II. i. 317. C. tripsacoides, *Br. in Salt Voy. Abyss. App.* 62 (*nomen*). C. uniflorus, *Ehrb. ms. ex Boiss. l.c.*

The PANJAB and UPPER GANGETIC PLAIN, *Royle*, &c. The CONCAN and SCIND, *Stocks*. RAJPOOTANA, *Duthie*. COROMANDEL, *Roxburgh*, &c.—DISTRIB. Beluchistan, Arabia, Africa.

Annual? *Stem* erect, 6–24 in., simple. *Leaves* narrow, glabrous or hairy, mouth of sheath hairy. *Spikes* 2–4 in., solitary, cylindric, green; rachis flexuous, angular, smooth; involucels loosely imbricate, spines sometimes hooked at the tip, inner $\frac{1}{6}$–$\frac{1}{4}$ in. long, as long as the sessile spikelets.

2. **C. catharticus,** *Delile Cat. Hort. Monsp.* 1838, in *Linnæa* xiii. (1839) *Litterb.* 103; base of involucels turbinate or truncate, inner spines squarrosely spreading subulate dorsally deeply grooved, margins ciliate or scaberulous, outer spreading or reflexed. *Steud. Syn. Gram.* 130; ?*Duthie Grass. N.W. Ind.* 9, *Indig. Fodd. Grass.* t. xi., *Fodd. Grass. N. Ind.* 15; *Boiss. Fl. Orient.* v. 448. C. annularis, *Anderss. in Peters. Reise Mossamb. Bot.* 553. C. echinatus, *A. Rich. Tent. Fl. Abyss.* ii. 389; *Wall. Cat.* n. 8654, A.D. *Aitchis. Cat. Panjab. Pl.* 163; ? *Duthie Grass. N.W. Ind.* 9 (*non Linn.*). C. Lapeta, *Herb. Ham. ex Wall. l.c.* D. C. niloticus, *Fig. & Notar. in Mem. Accad. Torin.* (1854), 380. Elymus Caput Medusæ, *Forsk. Fl. Æg. Arab.* 25 (*non Linn.*).

The PANJAB and UPPER GANGETIC PLAIN, *Hamilton*, *Royle*, &c.—DISTRIB. Arabia, Afric. trop.

Quite glabrous. *Stem* geniculately ascending, branched from the base, leafy. *Leaves* 1–3 in., lanceolate, finely acuminate, scaberulous; sheath inflated. *Spikes* 1–6 in., usually more or less enclosed in the uppermost leaf-sheath; rachis flexuous, smooth; involucels $\frac{1}{4}$–$\frac{1}{2}$ in. across the spreading spines. *Spikelets* $\frac{1}{8}$ in., 1–2-fld.; gl. I membranous; II and III hyaline, ovate, acuminate, 5-nerved; IV ovate-lanceolate, cuspidately acuminate.—Resembles *Pennisetum cenchroides*, but at once recognized by the rigid involucel spines. Duthie's figures under the names of *catharticus* and *montanus* are not recognizable. The widely distributed *C. echinatus*, Linn., is very closely allied, but should be recognized by the broader spines of the involucel. I doubt its being distinct.

16. STENOTAPHRUM, *Trin.*

Coarse grasses. *Stem* flattened. *Leaves* distichous. *Spikelets* spicate, partially sunk in one face of a broad flat herbaceous rachis, usually biseriate, ovate, acuminate, 1-fld., dorsally flattened, sometimes on short flat appressed branches of the rachis; rachis simple or jointed, tip acute. *Glumes* 4; I short, broad, rarely 0; II convex, empty; III as long as II, flat, paleate, empty or triandrous; IV equalling III, coriaceous, bisexual; palea large, ovate, acute, coriaceous. *Anthers* linear. *Styles* free. *Grain* broad, flattened, free within the hardened glume and pale.—Species 2 or 3 tropical.

1. **S. glabrum,** *Trin. Fund. Agrost.* 176, *Gram. Panic.* 60; gl. I very short truncate membranous nerveless. *Nees Agrost. Bras.* 92; *Doell in Mart. Fl. Bras.* ii. II. 301, t. 39. S. americanum, *Schrank Pl. Rar. Hort. Monac.* 98, t. 98, *in Flora*, vii. (1824) *Beib.* 27, 28; *Kunth Enum. Pl.* i. 138; *Benth. Fl Austral.* vii. 501; *Griseb. Fl. Brit. W. Ind.* 544. S. complanatum, *Schrank in Flora l. c.* 26; *Kunth Enum. l. c.* 137; *Nees l. c.* 93; *Thwaites Enum. Pl. Zeyl.* 361; *Trim. Cat. Ceyl. Pl.* 106; *Baker Fl. Maurit.* 440. S. dimidiatum, *Brong. Bot. Voy. Coq.* 127; *Wight Cat.* n. 1606. S. glabrum, *Trin. l. c.* 175; *Nees l. c.* S. Koenigii, *Schrank l. c.* S. madagascariense, *Kunth Revis. Gram.* ii. 163, t. 211; *Enum. Pl.* i. 524, *Suppl.* 99; *Steud. l. c.* 118. S. sarmentosum, *Nees in Mart. Fl. Bras.* ii. 93; *Fl. Afr. Austr.* 63. S. Swartzianum, *Nees Fl. Afr Austr.* 62. Rottboellia complanata, *Sw. in Ges. Fr. Naturf. Berl. Mag.* iv. (1810) 89, t. 5; *Schrank l. c.* R. compressa, *Beauv. Agrost.* 109, t. 21, f. 8,

R. dimidiata, *Thunb. Prodr. Fl. Cap.* 23. R. paleacea, *Steud. ex Doell in Mart. Fl. Bras.* ii. II. 301. R. tripsacoides, *Lamk. Illustr.* i. 205, t. 48, f. 1. Panicum dimidiatum, *Linn. Syst. Ed.* xiii. 90; *Willd. Sp. Pl.* i. 339; *Retz. Obs.* vi.; *Roxb. Fl. Ind.* i. 287. P. poæforme, *Bojer Hort. Maurit.* 365. Diastemanthe platystachys, *Steud. l. c.* 360. Ischæmum secundatum, *Walt. Fl. Carol.* 249.—Stenotaphrum, *Wall. Cat.* 8673.

PLAINS throughout INDIA.—DISTRIB. Tropics generally.

Stem stout, creeping below; branches 2 in. to 2 ft. high. *Leaves* 3–6 in. by $\frac{1}{3}$ in. broad or less; sheath broad, flat; ligule a ring of fine hairs. *Spike* erect, 2–4 by $\frac{1}{3}$-$\frac{1}{4}$ in., not or obscurely jointed; branches when present $\frac{3}{4}$ in. by $\frac{1}{6}$ in., erect. *Spikelets* $\frac{1}{6}$ in. long; gl. I about $\frac{1}{6}$ II, orbicular; II thin, ovate, acuminate, 7-nerved; III lanceolate, acuminate, margins thickened obscurely incurved.—Very variable in the number and arrangement of the spikelets.

2. **S. Helferi,** *Munro in Cat. Pl. Griff. Falc., &c.* (1865) *ined.*; gl. I half as long as III ovate-oblong strongly 3–5-nerved.—Panicum dimidiatum, *Heyne in Herb. Rottl.*

TENASSERIM, *Helfer.* MALAY PENINSULA; Plus river, *Wray;* Quedah, *King's Collector*; "Hengeiturei, Feb. 12th, 1796," *Heyne? in Herb. Rottler.*—DISTRIB. Tonkin.

Stem 1–2 ft., as thick as a crow-quill or thicker, base decumbent geniculate. *Leaves* 6–10 by $\frac{1}{3}$–$\frac{1}{2}$ in., strap-shaped, upper acuminate, lower obtuse apiculate; sheath broad, flat; ligule a ring of short hairs. *Rachis* of spikes 3–6 by $\frac{1}{4}$–$\frac{2}{3}$ in., straight or flexuous, not jointed; spikes $\frac{1}{4}$–$\frac{1}{2}$ in.; spikelets 3–6, imbricate, $\frac{1}{6}$–$\frac{1}{5}$ in. long, ovate, acute; gl. I obtuse; II lanceolate, thin, 7-nerved; III = II, 5-nerved, paleate, male; IV chartaceous, dorsally flattened ovate, beaked, smooth.—Heyne's specimen is probably from the Malay Peninsula, from whence he received plants; it is accompanied by one of *S. glabrum.*

17. **THUAREA,** *Pers.*

A small much-branched prostrate leafy littoral grass. *Leaves* short, flat. *Spike* terminal, included in a leaf-sheath; rachis flat, herbaceous, base at length accrescent and enveloping the spike. *Spikelets* uniseriate, jointed on one face of the rachis, 4–6 upper male, 2-fld.; 1–2 lower fem. or bisexual. *Glumes* 3–4; I small, hyaline, or in males 0; II empty; III and IV subequal, triandrous in the males; IV of the lower spikelets rigid, thin, bisexual, paleate. *Anthers* linear. *Styles* distinct. *Grain* free within the glume, but with the rest of the spikelets closely enveloped by the thick hardened base of the rachis, which forms an obconic caducous nut with a free deflexed and incurved beak.

T. sarmentosa, *Pers. Syn.* i. 110; *Kunth Revis. Gram.* i. 247, t. 35, *Enum. Pl.* i. 174, *Suppl.* 128; *Beauv. Agrost.* 127, t. 22, f. 9; *Steud. Syn. Gram.* 112; *Thw. Enum. Pl. Zeyl.* 363; *Trim. Cat. Pl. Ceyl.* 106; *Benth. Fl. Hongk.* 415, *Fl. Austral.* vii. 502. T. latifolia and media, *Br. Prodr.* 197; *Kunth Enum. l. c.* 173, 174. T. involuta, *Br. l. c.; Miq. Fl. Ind. Bat.* iii. 473. Ornithocephalochloa arenicola, *Kurz in Trim. Journ. Bot.* iv. (1875) 332, t. 171. Ischæmum involutum, *Forst. Prodr.* 73.

CEYLON, the LACCADIVE and NICOBAR ISLDS.—DISTRIB. Malay Islds., Madagascar, Australia, Polynesia.

Leaves 1–2 in., linear-oblong, acute, glabrous or silky; sheaths broad, silky; ligule of hairs. *Spikes* $\frac{1}{2}$–1 in. *Spikelets* $\frac{1}{8}$ in. *Glumes* obtuse, ciliate, I minute; II ovate-oblong, 5-nerved; III much broader, 5-nerved; IV oblong-lanceolate, tip ciliate. *Fruit* ⅓ in. long and broad, trigonously obconic or turbinate, obscurely ribbed, with a deep depression on one side of the crown.

Tribe II. ORYZEÆ. (See p. 3.)

18. **ORYZA**, *Linn.*

Leafy tall grasses. *Leaves* long, flat. *Spikelets* jointed on the slender branches of an elongate rarely spiciform panicle, 1-fld., oblong, laterally compressed, pedicels annular at the top. *Glumes* 2–3, I and II much the smallest, empty, scale or bristle-like, rarely 0; III chartaceous, obtuse acute or awned, strongly 3–5-nerved; palea as long as the gl., keeled. *Lodicules* 2, 2-lobed, rarely entire. *Stamens* 6, anthers linear. *Styles* short, free; stigmas laterally exserted. *Grain* narrow, free or adnate to the gl. and palea.—Species 5–6, tropical.

The gl. IV of most authors, is here considered to be a palea, as is indicated by the positions of the lodicules and stamens in relation to it.

1. **O. sativa**, *Linn. Sp. Pl.* 333; ligule long 2-partite, spikelets loosely panicled ⅓–½ in. long, gl. I and II ¼–⅓ the length of III lanceolate, III hispid above dorsally spinescently ciliate, awn very long. *Gærtn. Fruct.* ii. 5, t. 80, f. 5; *Host Gram. Austr.* iv. t. 325; *Lamk. Encycl.* t. 264; *Kunth Enum. Pl.* i. 7, *Suppl.* 4; *T. Nees Gen. Fl. Germ. Monocot.* i. 2; *Steud. Syn. Gram.* 3; *Roxb. Fl. Ind.* ii. 200; *Wall. Cat.* n. 8632; *Griff. Notul.* iii. 5, *Ic. Pl. Asiat.* t. 139, f. 149; *Dalz. & Gibs. Bomb. Fl. Suppl.* 98; *Duthie Grass. N.W. Ind.* 12, *Field & Gard. Crops*, 15, t. 4, *Fodd. Grass. N. Ind.* 20; *Miq. Fl. Ind. Bat.* iii. 368; *Doell in Mart. Fl. Bras.* ii. II. 7, t. 1; *Benth. Fl. Austral.* vii. 550. O. fatua, *Koen. ex Trin. in Mem. Acad. Petersb. Ser.* 6, ii. II. (1839) 177. O. rufipogon, *Griff. l.l. c.c.* & t. 145, f. 2, & t. 139, f. 147. O. palustris, *Salisb. Prodr.* 25. O. repens & palustris, *Herb. Ham. ex Wall. l. c.* F. *ex Steud. l. c.* O. segetalis, *Russ. ex Wall. l. c.* B. O. sorghoides, *Steud. l. c.*

Indigenous in marshes of RAJPOOTANA, SIKKIM, BENGAL, the KHASIA HILLS, CENTRAL INDIA, The CIRCARS and PEGU. CEYLON, *Ferguson.*—DISTRIB. Austral. trop.

Annual. *Stems* 2–10 ft., creeping or floating. *Leaves* 1–2 ft. by ¼–⅓ in. or more, flat, striated, 1-nerved, scaberulous; sheaths smooth. *Panicle* at length drooping. *Spikelets* not imbricating, awn 3–5 in. long, yellow or reddish, shining.—I have described above the plant which Roxburgh and other Indian authors consider to be the indigenous Rice, and who have collected it as such in the localities mentioned above, as I have in hot valleys of Sikkim and the Khasia Hills. It resembles in all essentials a commonly cultivated awned sort. I have seen no specimens of Griffith's *O. rufipogon*, which he describes as a very different-looking plant, but his characters are not diagnostic, and a memorandum by Munro (in Herb. Kew) states that he can find no real distinction for it. For the cultivated varieties of Rice in India, see Watt. "Dictionary of the Economic Products of India," vol. v. —The awnless O. denudata, *Steud. Nom. Ed.* I. 577 (O. mutica, *Steud. l. c.*; *Lour. Fl. Cochinch.* i. 267, O. sativa, *var.* submutica, *Miq. Fl. Ind. Bat.* iii. 369), is a cultivated form.

2. **O. latifolia**, *Desv. Journ. Bot.* i. (1813) 77; ligule very short, branches of panicle very long often whorled, spikelets subimbricate oblong beaked, gl. I and II = ¼–⅓ III lanceolate, III hispid finely granulate awn

as long or twice as long as the gl. *Kunth Revis. Gram.* i. 185, t. 4; *Enum. Pl.* i. 7, *Suppl.* 4. O. officinalis, *Wall.* & montana, *Ham. Wall. Cat.* n. 8635, 8633. O. platyphylla, *Sch. f. Syst.* vii. II. 1364.

Low valleys in SIKKIM, ASSAM, SILHET, CACHAR, MUNNEPORE, CENTRAL INDIA, and BURMA.—DISTRIB. Trop. As. Afr. and Amer.

Stems up to 6 ft., tufted, as thick as a swan's quill below. *Leaves* 1–2 ft. by ½–1½ in., nearly smooth, many-nerved; midrib slender, shining beneath; sheath very long. Branches of *panicle* 4–8 in., very slender; pedicels and branchlets bearded at the base. *Spikelets* ⅙–¼ in.; gl. III and palea hairy.

Var. *collina*; gl. I and II minute or 0. O. sativa, *Thwaites Enum. Pl. Zeyl.* 357. O. sativa *var.* collina, *Trim. mss.*—Ceylon; hills about Colombo and in the Western Provinces.

3. **O. granulata,** *Nees et Arn. in Wight Cat.* n. 2354, *ex Wall. Cat.* n. 8634; ligule very short, spikelets in simple racemes obtuse awnless; gl. I and II minute or 0, III and palea glabrous granulate. *Steud. Syn. Gram.* 3. O. filiformis, *Herb. Ham. ex Wall. l. c.* O. triandra, *Herb. Heyne ex Steud. l. c.* Padia Meyeriana, *Zoll. & Mor. Verz.* 103; *Miq. Fl. Ind. Bat.* iii. 373; *Steud. l. c.* 3.

In dry woods; SIKKIM HIMALAYA, the KHASIA, and BEHAR HILLS. MALABAR and MADURA, *Heyne, Wight*, &c. CEYLON; at Rambukkana, *Trimen.*—DISTRIB. Java.

Stems 2–3 ft., slender, tufted. *Leaves* 3–6 by ½ in., thin, midrib beneath and nerves distinct; sheath very long. *Racemes* very slender, on very long slender peduncles; rachis flexuous, rarely with a short branch at the base. *Spikelets* shortly pedicelled, ⅙–¼ in. long.

4. **O. Ridleyi,** *Hook. f*; very slender, leaves thin nerves distinct, ligule long, panicle with solitary alternate branches, spikelets ⅓–½ in., gls. I and II setaceous, III thinly chartaceous scabrid narrowly oblong dorsally spinulose-ciliate narrowed into an awn of about its own length.

MALAY PENINSULA; Pahang, in dense thickets, *Ridley.*—DISTRIB. Borneo.

Stem 2–3 ft., weak, as thick as a crow's quill below. *Leaves* 12 by ¾ in., nearly smooth; sheath long, slender. *Panicle* 12 in.; branches sometimes 6 in. and rachis very slender; pedicels ⅒-½ in.—Habit of *O. granulata*, but spikelets more like *O. coarctata.*

5. **O. coarctata,** *Roxb. Fl. Ind.* ii. 206; tall, stout, leaves coriaceous caudate-acuminate spinulose-serrate nerves obscure, ligule very short, panicle spiciform, branches few-fld., spikelets ½–⅔ in., gl. I and II setaceous, III narrowly dolabriform quite smooth dorsally winged tip narrowed into a short rigid awn quite smooth. *Wall. Cat.* n. 8646; *Griff. Notul.* iii. 8, *Ic. Pl. Asiat.* t. 142, f. 1; *Miq. Fl. Ind. Bat.* iii. 371. O. triticoides, *Griff. Notul. l. c.* Sclerophyllum coarctatum, *Griff. l. c.*

SUNDERBUNDS, *Hamilton, Roxburgh*, &c. SCIND, at Shikarpur (*Herb. Duthie*).

Stem 4–6 ft., erect from a stout creeping rhizome, branching, smooth, hard, polished. *Leaves* 6–12 by ⅓–½ in., unequal-sided, rigid, smooth or scaberulous, nerves and midrib obscure, tips long slender; sheath long, undulately reticulate, polished. *Panicle* 4–6 in., rachis and branches trigonous, stiff, quite smooth; pedicels clavate at the top and then contracted below the dilated cupular tip. *Spikelets* laxly imbricate, rigidly chartaceous; gl. I and II not half as long as III, erect; III strongly laterally often obliquely compressed, keeled, keel dilated above into a rounded wing, obscurely 7–9-nerved, lateral nerves submarginal; palea chartaceous, as long as the gl., oblong-lanceolate, acuminate, plicate, 5-nerved, median nerve faint, two intermediate very stout, lateral more slender. *Lodicules* large, membranous, subquadrate or trapeziform. *Anthers* very long and slender. *Ovary* narrow, elongate. *Grain* not seen.—A very remarkable species. In Gen. Plant (iii. 1117) this is by oversight stated to be Himalayan.

19. LEERSIA, *Sw.*

Characters of *Orzya*, but empty gls. 0; fl. gls. thinner not awned, keel and margin ciliate; stamens 6, 3 or fewer.—Species 7, chiefly American.

1. **L. hexandra,** *Sw. Prodr. Veg. Ind. Occ.* 21, *Fl. Ind. Occ.* i. 131; panicle contracted, stamens 6. *Fl. Dan.* t. 1744; *Kunth Enum. Pl.* i. 6; *Host Gram. Austr.* t. 35; *Engl. Bot.* t. 2908; *Reichb. Ic. Fl. Germ.* i. t. 52; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 1; *Wall. Cat.* n. 8637; *Thw. Enum.* 356; *Trim. Cat. Ceyl. Pl.* 106; *Duthie Grass. N.W. Ind.* 12; *Miq. Fl. Ind. Bat.* iii. 367; *Benth. Fl. Austral.* vii. 549. L. australis, *Br. Prodr.* 210; *Kunth l. c.* 6. L. ciliata, *Roxb. Fl. Ind.* ii. 207; *Aitchis. Cat. Panjab. Pl.* 157; *Duthie l. c.*, *Fodd. Grass. N. Ind.* 21. L. ciliaris, *Griff. Notul.* iii. 2. L. glaberrima, *Trin. Oryz.* 7; *Miquel l c.* 368. L. mexicana, *H. B. & K. Nov. Gen. & Sp.* i. 195; *Kunth l. c.* 6, & ii. 2, *Suppl.* 2; *Revis. Gram.* 178, t. 1. Zizania ciliata, *Spreng. Syst.* ii. 136; *Kunth Revis. Gram.* i. 8; *Griff. Notul.* iii. 1. Oryza ciliata, *Herb. Ham. ex Wall. Cat.* n. 8637 B. O. hexandra, *Doell in Mart. Fl. Bras.* ii. II, 10. Pharus ciliatus, *Retz. Obs.* v. 23. Pseudoryza ciliata, *Griff. Ic. Pl. Asiat.* t. 144, f. 1. Turraya napalensis, *Wall. Cat.* 8637 D. Blepharochloa ciliata, *Endl. Gen.* 1352; *Steud. l. c.* 4.

LOWER HIMALAYA; in marshes, from Nepal eastward to Assam and Burma, and southward to the Malay Peninsula and CEYLON.—DISTRIB. Trop. Afric., Amer., and Austral.

Stem 2–4 ft., weak, base rooting; nodes villous. *Leaves* erect, 8–12 in. by $\frac{1}{3}$–$\frac{1}{2}$ in., flat; ligule truncate. *Panicle* 2–4 in., oblong, branches suberect or spreading flexuous, few-fld. *Spikelets* $\frac{1}{6}$ in., dimidiate-oblong, smooth or scaberulous, pale green; keel of gl. and palea rigidly ciliate.

2. **L. oryzoides,** *Sw. Prodr. Veg. Ind. Occ.* 21, *Fl. Ind. Occ.* i. 132; panicle effuse, stamens 3. *Host Gram. Austr.* i. t. 35; *Kunth Enum. Pl.* i. 5, *Suppl.* 1; *Reichb. Ic. Fl. Germ.* i. t. 52. Oryza clandestina, *A. Br. ex Aschers. Fl. Brandenb.* 799. Asprella oryzoides, *Lamk. Ill.* i. 167; *Roem. & Sch. Syst.* ii. 266. Homalocenchrus oryzoides, *Mieg. ex Poll. Hist. Pl. Palat.* i. 52. Phalaris oryzoides, *Linn. Sp. Pl.* 55 (*excl. cit.*); *Schreb. Beschr. Græse*, vi. t. 22.

KASHMIR, *Falconer*, *Thomson*.—DISTRIB. Trop. and temp. regions.

Stem 2–3 ft., nodes villous. *Leaves* glaucous, scaberulous; sheath compressed; ligule lacerate. *Panicle* 3–7 in., base embraced by the upper leaf-sheath. *Spikelets* few, remote, $\frac{1}{6}$ in. long.

20. HYGRORHIZA, *Nees.*

A floating glabrous grass. *Leaves* short, broad, flat. *Spikelets* few, lanceolate, 1-fld., shortly pedicelled on the few branches of a broad spreading panicle, articulate on the annulate tip of the pedicel. *Glume* solitary (empty gls. 0), flg. membranous, lanceolate, narrowed into a long awn, 5 nerved, keel and nerves ciliate; palea acuminate, 3-nerved, keel scabrid. *Lodicules* 2, gibbous. *Stamens* 6, anthers very long. *Styles* short, free, stigmas laterally exserted. *Grain* narrowly oblong, free within the membranous glumes.

H. aristata, *Nees in Edinb. New Phil. Journ.* xv. (1833) 380; *Steud. Syn. Gram.* 5; *Thw. Enum. Pl. Zeyl.* 356; *Trim. Cat. Ceyl. Pl.* 106; *Duthie Grass. N.W. Ind.* 12, *Fodd. Grass.* N. *Ind.* 20; *Aitchison Cat. Panjab Pl.* 157; *Wall. Cat.* n. 8638; *Wight Cat.* n. 1739. Leersia aristata, *Roxb. Fl. Ind.* ii. 207; *Griff. Notul.* iii. 3; *Steud. l. c.* Pharus aristatus, *Retz. Obs.* v. 23. P. natans, *Herb. Russel, ex Wall. l. c.* Zizania aristata, *Kunth Revis. Gram.* i. 8, *Enum. Pl.* i. 10. Z. Retzii, *Spreng. Syst.* ii. 136. Potamochloa Retzii, *Griff. Notul.* iii. 3, 8, *Ic. Pl. Asiat.* t. 139, f. 147, & t. 140.—*Rheede Hort. Mal.* x. t. 12.

UPPER and LOWER GANGETIC PLAINS, ASSAM, CHITTAGONG, PEGU, the DECCAN and CEYLON.—DISTRIB. Tonkin.

Stem as thick as a crow-quill, 12–18 in. long, with feathery whorled roots at the nodes. *Leaves* 1–3 by ½–⅔ in., ovate-lanceolate to linear-oblong, scaberulous above; base and tip rounded, or tip acute and base cordate; sheath broad, inflated, compressed, mouth auricled; ligule 0. *Panicle* 2–3 in. long, and broad triangular, branches few, spreading, slender, lower whorled, often deflexed. *Spikelets* ⅓ in. long, pale green, pedicels articulate with a red annulus below the middle. *Glume* dorsally convex; palea as long, awn longer than the gl.

21. LEPTASPIS, *Br.*

Tall monœcious grasses. *Leaves* petioled, elliptic-oblong, flat, nervules trabeculate. *Panicle* terminal, erect; branches whorled, long, stiff, bearing a raceme of spikelets at their tips, of which the upper are male. *Spikelets* not jointed on the very short pedicels. MALE, glumes 3, I and II small, ovate, empty, 5–7-nerved, spreading; III paleate, hexandrous; filaments short, anthers long. FEM. a utricle open at the top, enclosing the ovary and a linear palea, the tip of which is exserted. *Lodicules* small, truncate. *Styles* 3, very long. *Grain* free within the inflated accrescent utricle.—Species 3 or 4, tropical Asia, Africa, and Australia.

1. **L. urceolata,** *Br. in Benn. Pl. Jav. Rar.* 23, t. 6; leaves 7–12 in. long-petioled elliptic-lanceolate or oblanceolate, branches of panicle many stout, utricles turbinately pyriform. *Wall. Cat.* n. 8901; *Miq. Fl. Ind. Bat.* iii. 374; *Steud. Syn. Gram.* 8; *Thw. Enum. Pl. Zeyl.* 357; *Trim. Cat. Ceyl. Pl.* 106. L. zeylanica, *Nees ex Steud. l. c.* L. manillensis, *Steud. l. c.* Pharus urceolatus, *Roxb. Fl. Ind.* iii. 611.

PENANG, *Roxburgh.* JOHORE, *King's Collector.* CEYLON, *Thwaites.*—DISTRIB. Java, Sumatra.

Rootstock creeping; stem 2–3 ft. *Leaves* subdistichous, 2–4 in. broad, abruptly acuminate; petiole ½–2 in.; sheath 3–10 in., flattened. *Panicle* 6–12 in. long; lower branches 6–10 in. *Fem. spikelets* ⅙ in. long.

2. **L. cochleata,** *Thw. Enum. Pl. Zeyl.* 357; leaves 4–10 in. shortly petioled oblong-lanceolate, branches of panicle few slender, utricles oblong incurved 5-ribbed tomentose with hooked hairs. *Trim. Cat. Ceyl. Pl,* 106.

CEYLON; in the Central Province, alt. 4000 ft., *Thwaites.*

Stems 2–3 ft. from a procumbent base. *Leaves* 1½–1¾ in. broad, acuminate; petiole ¼–½ in.; sheath 1–3 in. *Panicle* 6–8 in.; branches 3–4 in., ternately whorled. *Fem. spikelets* ⅒ in.; glumes broadly ovate, acuminate. *Utricle* ¼ in. long. *Grain* not seen.

TRIBE III. ZOYSIEÆ. (See p. 3.)

22. **TRACHYS**, *Pers.*

An annual diffuse softly villous grass. *Spikes* 2- rarely 3-nate, terminal, flattened, rigid, flexuous, jointed. *Spikelets* 1-fld., in alternate subsessile fascicles which are jointed on the under surface of the spikes, and are formed of 1–3 perfect sessile spikelets mixed with squarrose flowerless gls. *Glumes* of perfect spikelets 4, I minute, triangular, coriaceous, nerveless; II narrow, linear-lanceolate, membranous, 3–5-nerved, nerves ciliate below the middle; III much the largest, broadly obovate-oblong, cuspidately acuminate, rigidly coriaceous, 9-nerved epaleate; IV much smaller, ovate-lanceolate, cuspidately acuminate, chartaceous, 1-nerved; palea lanceolate, chartaceous, nerveless. *Lodicules* very minute, hyaline. *Stamens* 3, anthers linear. *Styles* long, free, stigmas long. *Grain* broadly oblong, compressed, free within the gl. and pale.

The above description differs from any that I have met with. Gl. III of the perfect spikelet is much larger than any of those of the imperfect spikelets, which form a squarrose tuft around the perfect.

T. mucronata, *Pers. Syn.* i. 85; *Beauv. Agrost.* 107, t. 21, f. 7; *Kunth Enum. Pl.* i. 168, *Suppl.* 123; *Thw. Enum. Pl. Zeyl.* 362; *Trim. Cat. Ceyl. Pl.* 106; *Miq. Fl. Ind. Bat.* ii. 472; *Wall. Cat.* n. 8674; *Wight Cat.* n. 1660. T. muricata (*error for* mucronata), *Steud. Syn. Gram.* 112. Cenchrus muricatus, *Linn. Mant.* 302; *Schreb. Beschr. Græs.* ii. 69, t. 34. C. tripsaceus, *Herb. Linn. ex Munro in Journ. Linn. Soc.* vi. (1862) 55. Trachystachys geminata, *A. Dietr. Sp. Pl.* ii. 16. Tripsacum distachyum, *Herb. Linn. ex Munro l. c.* Trachyozus muricata, *Steud. l. c.* 112. Panicum dimidiatum, *Burm. Fl. Ind.* 25, t. 8, f. 3. P. squarrosum, *Retz. Obs.* iv. 15, v. t. 1; *Roxb. Cor. Pl.* iii. 4, t. 206; *Fl. Ind.* i. 288.

The DECCAN PENINSULA; sandy ground near the sea; *Heyne*, *Roxburgh*, &c. CEYLON; Jaffna, *Gardner*.

Stems 1–2 ft., weak, geniculate, rooting at the nodes. *Leaves* 2–6 by ¼–½ in., linear-lanceolate, acuminate, flaccid, rarely nearly glabrous, margins often crisped; mouth of sheath hairy; ligule obscure. *Peduncle* long or short. *Spikes* 2–3 in., sessile or shortly peduncled, costa of rachis stout, margins broad, green; joints concave subquadrate. *Spikelets* (perfect) ⅕ in. long, sessile or very shortly stoutly pedicelled, pale, shining, terminal one on the spike solitary; gl. II very much narrower than III, and not overlapping the base of the latter or hardly, epaleate; III nearly flat, with the margins incurved; IV with the palea terete, margins strongly incurved over the palea.—The structure of gl. II is very peculiar; at first sight it may be taken for a narrow membranous palea of III, its lower insertion to which and exterior position are difficult to distinguish.

23. **TRAGUS**, *Haller.*

A low rigid perennial grass. *Leaves* small. *Spikelets* 1-fld., 2–5-nate in narrow spikes, not articulate on the pedicels; rachis slender. *Glumes* 2; I thickly coriaceous, oblong-lanceolate, 5-ribbed, ribs with long recurved spines embracing II which is chartaceous, oblong, apiculate, 1-nerved, scaberulous; palea hyaline, obtuse, involute, faintly 2-nerved below. *Stamens* 3, anthers very long. *Styles* short, distant, stigmas short. *Grain* linear, free within the glumes.

T. racemosus, *Scop. Introd. Hist Nat.* 73; *Desf. Fl. Atlant.* ii. 386; *T. Nees Gen. Fl. Germ. Monoc.* i. n. 25; *Trimen Cat. Ceyl. Pl.* 106; *Duthie Grass. N.W. Ind.* 13, *Indig. Fodd. Grass.* t. 14, *Fodd. Grass. N. Ind.* 22. T. muricatus, *Moench Meth.* 53. T. alienus, biflorus, & Berteronianus, *Schult. Mant.* ii. 205. T. brevicaulis, *Boiss. Diagn. Ser.* I. xiii. 44. T. occidentalis & orientalis, *Nees Agrost. Bras.* 286; *Doell in Mart. Fl. Bras.* ii. II. 286, t. 28. T. Halleri, *Doell l. c.* 122. T. biflorus, *Nees ex Wight Cat.* 1661. Lappago racemosa, *Honck. Syn. Pl. Germ.* i. 440; *Host Gram. Austr.* i. t. 36; *Sibth. Fl. Græc.* ii. t. 101; *Kunth Enum. Pl.* i. 169, *Suppl.* 124; *Steud. Syn. Gram.* 112; *Reichb. Ic. Fl. Germ.* i. t. 30; *Wall. Cat.* n. 8675; *Thw. Enum. Pl. Zeyl.* 362; *Aitchis. Cat. Panjab. Pl.* 163; *Benth. Fl. Austral.* vii. 506; *Miq. Fl. Ind. Bat.* iii. 473. L. biflora, *Roxb. Fl. Ind.* i. 281; *Grah. Cat. Bomb. Pl.* 234. L. aliena, *Spreng. Neue Entdeck.* iii. 15, *Syst. Pl.* i. 266; *Steud. l. c.*; *Dalz. & Gibs Bomb. Fl.* 295. L. occidentalis, *Nees in Schimp. Pl. Arab. Fel. Ed.* ii. n. 793. Cenchrus racemosus, *Linn. Sp. Pl.* 1049; *Schreb. Beschr. Graes.* 45, t. 4. C. linearis, *Lam. Fl. Franc.* iii. 631. C. muricatus, *Herb. Russ. ex Wall. l. c.* A. Phalaris muricata, *Forsk. Fl. Æg. Arab.* 302. Aira malatrina, *Herb. Ham. ex Wall. l. c.* D.

Dry plains of INDIA; from Kashmir to Upper Bengal, and southward to CEYLON. BURMA, *Wallich.*—DISTRIB. Warm regions generally.

Stems erect in the first year, 4–8 in. high, leafy nearly to the spikes, then sending from the base rooting and leafing flg. stolons all round. *Leaves* very variable, smooth or scaberulous, ovate and $\frac{1}{4}$ in. long, or narrower and 1–$1\frac{1}{2}$ in. long, acuminate, margins and mouth of sheath ciliate. *Spikes* 1–4 in., rachis and very short pedicels pubescent. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in., crowded, in pairs face to face, simulating one spikelet with 2 equal spinous glumes. Gl. II with broad hyaline margins towards the tip.—In all Indian specimens I find the spikelets in pairs, each with 2 gl. I have not seen the fascicled spikelets described in Gen. Plant. A small lower gl. is described as sometimes present, and 5 spikelets as occurring on a single pedicel.

24. LATIPES, *Kunth.*

A perennial rather rigid grass. *Leaves* subulate, convolute. *Spikelets* 1-fld., in simple subspiciform racemes, biseriate (one usually imperfect) persistent on the flattened truncate spreading articulate pedicels; rachis flexuous. *Glumes* 3, I and II empty, thickly coriaceous, I usually longest, narrow, recurved, 3-nerved, subspinously pectinate, dorsally smooth; II lanceolate, spinously tubercled, embracing III (flg.), which is shorter, hyaline, oblong, acute, ciliate; palea minute, linear-oblong, nerveless. *Lodicules* 2, hyaline. *Stamens* 3, anthers oblong. *Styles* free. *Grain* free, obliquely ovate-lanceolate.

L. senegalensis, *Kunth Revis. Gram.* i. 261, t. 42, *Enum. Pl.* i. 171, *Suppl.* 125; *Duthie Grass. N.W. Ind.* 13, *Fodd. Grass. N. Ind.* 22. Lappago Latipes, *Steud. Syn. Gram.* 112. T. senegalensis, *J. Gay ex Kunth Enum. l. c.*

SCIND, at Kurrachee, *Stocks.* BELUCHISTAN, *Frere.*—DISTRIB. Arabia, Abyssinia, Senegal.

Stems 3–10 in. wiry, creeping with many erect or spreading branches, leafy up to the racemes. *Leaves* 1–3 in.; lower sheaths short, mouth hairy; ligule 0. *Racemes* 2–6 in.; rachis glabrous; pedicels distant, narrowly cuneiform, margins winged ciliate. *Spikelets* $\frac{1}{6}$–$\frac{1}{5}$ in., reddish-brown.—The Indian specimens are small. The pedicels are flattened and bear normally 2 spikelets, one well developed and fertile, the other imperfect with gl. I and II narrower of equal length and irregularly spinously tubercled.

25. **LOPHOLEPIS**, *Decne.*

An annual tufted erect grass. *Leaves* short, flat. *Spikelets* minute, 1-fld., jointed but persistent on the very short spreading pedicels of an elongate simple spiciform raceme, exactly like a bird's head; pedicels jointed on the rachis. *Glumes* 3; I incumbent, oblong, acute, strongly incurved above the base, produced above into a globose boss with a pectinate crest, and with a pectinate wing on the mesial line beyond it; II shorter, narrower, with often a dorsal pectinate wing; III flg. much shorter, hyaline, ovate, acute; palea hyaline. *Lodicules* quadrate. *Stamens* 2; anthers short, most minute. *Styles* short; stigmas feathery. *Grain* subulate, base gibbously incurved, free within the rigid glumes.

L. ornithocephala, *Steud. Syn. Gram.* 112; *Decne in Archiv. Mus. Par.* i. (1839) 147; *Wall. Cat.* n. 8881. Holboellia ornithocephala, *Wall. in Hook. Bot. Misc.* ii. 144, t. 76; *Wight Cat.* n. 1741; *Kunth Enum. Pl.* i. 171.

Southern Provinces of the DECCAN PENINSULA, Madura, Tinnevelly, &c., *Koenig*, &c. CEYLON; Northern Province, *Trimen.*

A rather stiff grass, 6–18 in. high; roots wiry. *Leaves* $\frac{1}{2}$–$1\frac{1}{2}$ in., ovate to oblong-lanceolate, acuminate, margins ciliolate; lower sheaths short; ligule 0. *Racemes* 2–4 in., columnar, $\frac{1}{8}$ in. diam.; rachis slender, strict, and the horizontal rather stout grooved pedicels green and scabridly ciliate. *Spikelets* $\frac{1}{16}$–$\frac{1}{12}$ in. long, red-brown in age, horizontal or slightly deflexed from the pedicel.—One of the most singular Indian grasses.

26. **PEROTIS**, *Ait.*

A slender grass, with short broad leaves and a crinite spike. *Spikelets* subsessile, 1-fld., jointed on a slender simple unjointed rachis, very narrow, callus conical. *Glumes* 3; I and II empty, subequal, narrowly linear, 1-nerved, tapering into long capillary awns; III very minute, flg.; palea hyaline. *Lodicules* short, hyaline. *Stamens* 3, anthers very short. *Styles* very short, united at the base, stigmas very short. *Grain* much longer than its glumes, narrow.

P. latifolia, *Ait. Hort. Kew*, i. 85; *Beauv. Agrost.* t. 4, f. 9; 6 (laxifolia), *Kunth Revis. Gram.* i. 357, t. 92, *Enum. Pl.* i. 471, *Suppl.* 380; *Steud. Syn. Gram.* 186; *Roxb. Fl. Ind.* i. 239; *Wall. Cat.* n. 3783; *Wight Cat.* n. 1740; *Grah. Cat. Bomb. Pl.* 237; *Dalz. & Gibs. Bomb. Fl.* 296; *Thw. Enum. Pl. Zeyl.* 369; *Trim. Cat. Ceyl. Pl.* 106; *Duthie Grass. N.W. Ind.* 13; *Benth. Fl. Hongk.* 418; *Miq. Fl. Ind. Bat.* iii. 479. P. Burmanni, *Steud. Nom. Ed.* I. 605. P. cubana, *Wright in Sauv. Fl. Cub.* 202. P. glabrata, *Steud. Syn. Gram.* 186. P. hordeiformis, *Nees ex Steud. Nom. Ed.* II. ii. 306; *Syn. Gram. l. c.*; *Trin. in Mem. Acad. Petersb. Ser.* VI. vi. II. (1845) 267. P. longiflora, *Nees in Hook. & Arn. Bot. Beech. Voy.* 247; *Steud. Syn. Gram.* 186. P. patula, *Nees ex Steud. Nom. l c.*; *Trin. Fund. Agrost.* ii. 266; *Steud. Syn. Gram.* 186. P. rara, *Br. Prodr.* 172; *Benth. Fl. Austral.* vii. 509. P. scabra, *Willd. ex Trin. Diss.* ii. 172. P. spicæformis, *Beauv. ex Steud. Nom. Ed.* I. 605. Perostis laxifolia, *Beauv. l. c.* 6. Saccharum spicatum, *Linn. Sp. Pl.* 54. S. brevifolium, *Herb. Ham. ex Wall. l c.* B. Agrostis spicæformis, *Linn. f., Suppl.* 108; *Willd. Sp. Pl.* i. 362. Anthoxanthum indicum, *Linn. Sp. Pl.* 28. Xystidium barbatum, *Presl Rel. Hænk.* i. 228. X maritimum, *Trin. Fund. Agrost.* 102, t. 2.—*Rheede Hort. Mal.* xii. t. 62.

LOWER HIMALAYA, ascending to 5000 ft., from Kunawur to Sikkim. PLAINS OF INDIA from the Panjab to Burma and the Malay Peninsula and southwards to CEYLON.—DISTRIB. Affghan., Trop. Asia, and Africa.

Stems stout and branching at the base, then ascending, 3–10 in., leafy. *Leaves* $\frac{1}{2}$–1 in., ovate or lanceolate, base cordate; sheath short; ligule ciliate. *Spikes* 1–8 in. *Spikelets* $\frac{1}{10}$–$\frac{1}{6}$ in., contracted into a callus above the joint. *Glumes* scaberulous; awn very variable in length.—Bentham is, I think, right in his suggestion that *P. rara*, Br., is not different from *P. latifolia*, and that there is but one species of *Perotis*, varying greatly in the size of all its parts.

27. **ZOYSIA**, *Willd.*

A small, much branched, rigid, glabrous grass. *Leaves* subulate, pungent. *Spikelets* small, ovoid, 1-fld., spicate, subimbricate, jointed on and appressed to a rigid notched unjointed rachis, sessile or shortly pedicelled. *Glumes* 2; I empty, coriaceous, laterally compressed, shining, nerveless, margins connate below, hyaline; II much smaller, membranous, linear-oblong, obtuse, complicate; palea short, nerveless, hyaline or 0. *Lodicules* 0. *Stamens* 3, anthers long. *Styles* very long, distinct, stigmas elongate. *Grain* free within the glumes.

Z. pungens, *Willd. in Ges. Naturf. Fr. N. Schr.* iii. (1801) 441; *Br. Prodr.* x. 208; *Kunth Enum. Pl.* i. 471, *Suppl.* 381; *Beauv. Agrost.* i. t. 4, f. 1; *Steud. Syn. Gram.* 414; *Wall. Cat.* n. 3763; *Wight Cat.* n. 1728; *Thw. Enum. Pl. Zeyl.* 370; *Trim. Cat. Ceyl. Pl.* 106; *Miq. Fl. Ind. Bat.* iii. 478; *Hook. f. Fl. New Zeal.* i. 312; *Benth. Fl. Austral.* vii. 506; *Buchanan Grasses, N. Zeal.* t. 13 A.; *Baker Fl. Maurit.* 442. Z. aristata, Brownii, Griffithiana, & sedoides, *C. Muell. in Bot. Zeit.* xiii. (1855) 272, 273, 274. Z. japonica, *Wendl. ex Steud. l. c.* 414. Z. sinica, *Hance in Journ. Bot.* vii. (1869) 168, *& in Journ. Linn. Soc.* xiii. (1873) 134. Z. setacea, *Nees ex Steud. Nom. Ed.* II. ii. 801. Z. tenuifolia, *Trin. in Mem. Acad. Petersb. Ser.* VI. iv. *Sc. Nat.* ii. (1836) 96. Matrella juncea, *Pers. Syn.* i. 78. Panicum Crinum-ursi, *Bory ex Steud. Nom. l. c.* 255. Milium maritimum, *Koen. ex Wall. l. c.* Ophiurus erectus, *Herb. Wight. ex Wall. l. c.* B. Agrostis Matrella, *Linn. Mant.* ii. 185; *Roxb. Fl. Ind.* i. 317.

Sandy shores of INDIA, MALACCA, and CEYLON.—DISTRIB. Trop. Asia, Austral., and Maurit.

Rootstock rigid, wiry; branches interlaced and rooting, sending up short leafy stems, 6–10 in. high. *Leaves* 1–3 in., coriaceous, usually spreading, margins incurved; sheath short, mouth ciliate. *Spikes* 1–$1\frac{1}{2}$ in. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in.

Tribe IV. ANDROPOGONEÆ. (See p. 3.)

28. **COIX,** *Linn.*

A tall annual or perennial grass. *Leaves* long, broad. *Spikes* numerous, axillary and terminal; lower spikelets solitary, fem., enclosed in an at length hardened polished nut-like bract, through the apex of which the pedicelled male portion protrudes. *Male spikelets* 2–3-nate at each node of the rachis, one sessile and one or two pedicelled, lanceolate; glumes 4, I and II subequal, empty, rigid, or herbaceous; I keeled along the inflexed margins; III and IV hyaline, paleate, triandrous or empty. *Fem. spikelets* ovoid, acuminate; glumes 4, I chartaceous; II–IV successively thinner; IV paleate. *Staminodes* minute. *Lodicules* 0. *Ovary* ovoid, styles 2, free slender. *Grain* orbicular, ventrally furrowed, enclosed in the hardened globose ovoid or cylindric involucre.

C. Lachryma-Jobi, *Linn. Sp. Pl.* 972; C. Lachryma, *Linn. Syst. Ed.* x. 1261; *Lamk. Ill.* t. 750; *Kunth Enum. Pl.* i. 20, *Suppl.* 16, t. 3, 4; *Beauv. Agrost.* t. 24, f. 5; *Bot. Mag.* t. 2479; *Steud. Syn. Gram.* 9; *Webb. Phyt. Canar.* t. 242, 243; *Roxb. Fl. Ind.* iii. 568; *Grah. Cat. Bomb. Pl.* 240; *Wall. Cat.* n. 8623; *Griff. Notul.* iii. 10; *Thw. Enum. Pl. Zeyl.* 375; *Trimen Cat. Ceyl. Pl.* 106; *Dalz. & Gibs. Bomb. Fl.* 289; *Aitchis. Cat. Panjab. Pl.* 157; *Duthie Grass. N.W. Ind.* 11, *Fodd. Grass. N. Ind.* 18; *Miq. Fl. Ind. Bat.* iii. 476, t. 41 B. C. agrestis, *Lour. Fl. Cochinch.* 551. C. arundinacea, *Lamk. Encycl.* iii. 422. C. exaltata, *Jacq. Eclog. Gram.* 6, t. 40. C. ovata, *Stokes Bot. Mat. Med.* iv. 342. C. pendula, *Salisb. Prodr.* 28. C. puellarum, *Balans. in Journ. de Bot.* iv. (Paris, 1890), 77. C. stigmatosa, *Koch & Bouchè, Ind. Sem. Hort. Berol.* (1855) 9. Lithagrostis Lacryma-Jobi, *Gærtn. Fruct.* i. 7, t. i. f. 10.

Throughout the hotter and damper parts of INDIA, wild or cultivated (not wild in Ceylon).—DISTRIB. Trop. Asia, cult. in Africa and America.

Stem 3–5 ft., stout, leafy, rooting at the lower nodes. *Leaves* 4–18 by 1–2 in., wavy, base cordate; sheaths smooth; ligule very short, glabrous. *Spikes* 2–3 in., suberect, peduncled; male spikelets 3, or 2 with an imperfect one, ⅓ in. long; gl. I narrowly winged. *Fruit* ovoid or spherical, ¼–⅓ in. long, osseous, bluish gray.

VAR. *gigantea*, Stapf mss.; perennial, attaining 15 ft. high, leaves narrower more strict, male spikelets 3-nate at the internodes, often forming long cylindric drooping spikes, gl. I broadly winged, fruit as in the type. C. gigantea, *Roxb. Fl. Ind.* iii. 569; *Wall. Cat.* n. 8624, 8625. *Aitch. Cat. Panjab. Pl.* 157; *Duthie Grass. N.W. Ind.* 11; *Fodd. Grass. N. Ind.* 18. C. lingulata, *Hack. in Œstr. Bot. Zeitschr.* (1891) 5.—*Rheede Hort. Mal.* xii. t. 70.—Hot valleys from the N.W. Provinces to Assam and southwards to the Malay Peninsula and Travancore.—Affghanistan.

VAR. *stenocarpa*, Stapf mss.; fruit subcylindric ¼–⅔ in. long white osseous. C. stenocarpa, *Balans. l. c.* C. tubulosa, *Hack. in Engl. Bot. Jahrb.* iii. 260?—Upper Assam, *Bruce*. Mergui, *Griffith*. Karen Hills, *Wallich*.—Tonkin, N. Guinea.

VAR. *Ma-yuen*, Stapf mss.; annual, fruit crustaceous or chartaceous. C. Mayuen, *Roman. in Bull. Soc. Acclim. Paris.* Ser. 3, viii. (1881) 442. Sikkim and the Khasia hills, ascending to 5000 ft. (cult.). Burma, *Watt*.—Cochinchina, Borneo, Ins. Philipp.

DOUBTFUL SPECIES.

C. AQUATICA, *Roxb. Fl. Ind.* iii. 571; floating and creeping from 50–100 ft., leaves linear most acute, margins hispid, male spikes drooping many-fld., flowers 3-fold, middle one pedicelled fem., corolla 6–7-valved, seeds turbinate." "Floating in margins of lakes in Lower Bengal," *Roxb.* This species is unknown to me and to the officers of the Calcutta Bot. Gardens.

29. **POLYTOCA,** *Br.*

Tall branching grasses; nodes bearded; flg. branches fascicled, spathaceous. *Leaves* long, flat. *Spikes* solitary or panicled, bisexual and fem. below, or the upper male only, rachis jointed; spikelets geminate, a sessile and a pedicelled. *Male spikelets* lanceolate, 2-fld.; gls. 4, I many-nerved, 2 keeled; II 5–7-nerved; III and IV hyaline, paleate, triandrous; anthers very long. *Lodicules* cuneate. *Fem. spikelets* imbricate, the pedicelled imperfect, its pedicel confluent with the rachis; gls. of sessile spikelet 4, I oblong, coriaceous, margins inflexed embracing the rachis, at length crustaceous; II thin, acuminate; III hyaline, epaleate; IV hyaline, paleate, fertile. *Staminodes* and *lodicules* 0. *Ovary* minute; styles long, stigmas slender. *Grain* very small, orbicular, enclosed in the hardened outer gls.—Species 8, tropical Asiatic and Australian.

* *Infl. mostly compound; male spikelets terminal, superposed, hairy; fem. 3–7. Pedicelled fem. spikelets of one bract-like gl. terminating the joint of the rachis.—Spathes always tightly closed.*

1. **P. bracteata,** *Br. in Bennett Pl. Rav. Jav.* 20, t. 5; male spikes rather stiff, pedicelled spikelets mostly (nearly all) rudimentary and adnate to the rachis. *Steud. Syn. Gram.* Coix heteroclita, *Roxb. Fl. Ind.* III. 572; *Wall. Cat.* n. 8627.

Sikkim Terai, Assam and the Khasia Hills, ascending to 5000 ft. Burma, on the Shan hills, *Collett.*—Distrib. Tonkin.

Stem 3–5 ft., stout or slender; sheaths and leaves glabrous, or hirsute with tubercled-based hairs. *Leaves* $1\frac{1}{2}$–2 ft. by $\frac{2}{3}$–1 in., margins rough, base contracted. *Inflorescence* 3–6 in., usually long-pedicelled and digitate; lower branches spreading or deflexed; rachis hairy. *Male spikelets* $\frac{1}{4}$ in., glabrous or pubescent; fem. spikelets less than $\frac{1}{4}$ in., pale, shining; rudimentary pedicelled spikelets lanceolate, $\frac{1}{2}$–1 in. long, at length spreading; gl. I oblong, obtuse or emarginate, 2-keeled.

2. **P. Wallichiana,** *Benth. in Journ. Linn. Soc.* xix. (1881) 52; male spikes slender flexuous, pedicelled spikelets free. Cyathorhachis Wallichiana, *Nees ex Steud. Syn. Gram.* 403.—Gen. Nov. *Wall. Cat.* n. 8629.

Burma; Prome and Tenasserim, *Wallich*; Pegu, *M'Lelland*, &c.; Tenasserim, *Wallich, Helfers.*

Stem leaves and sheaths glabrous or hispid with tubercle-based bristles. *Leaves* 2–3 ft. by 1–$1\frac{1}{4}$ in., lower narrowed from the middle to the base. *Terminal infl.* often long peduncled, branches 2–$2\frac{1}{2}$ in.; lateral more or less enclosed in the spathe; rachis hairy. *Male spikelets* $\frac{1}{4}$ in.; fem. as long, pale, shining; rudimentary pedicelled spikelets $\frac{3}{4}$ in., lanceolate, at length spreading.

** *Terminal infl. only compound; male not spathaceous, fem. spathaceous, spathe at length expanded, lateral of simple spikes. Pedicelled fem. spikelets of 2 gls., pedicels adnate to the rachis.*

3. **P. Cookii,** *Stapf in Hook. Ic. Pl.* t. 2333; male infl. very fragile, spikes 2–3 in., pedicelled spikelets free, fem. spikelets glabrous, gl. I 3-lobulate at the tip.

N. Canara and the Concan, *Jacquemont*, &c.

Annual. *Stem* 3 ft. and leaves more or less hispid with tubercle-based hairs. *Leaves* $1\frac{1}{2}$–2 ft. by 2–3 in., margins thickened. *Male infl.* often long-peduncled, rachis villous; spikelets $\frac{1}{4}$ in. *Fem. spikes* 1 in. long; spathe 1–$1\frac{1}{2}$ by $\frac{1}{3}$-$\frac{1}{2}$ in., at length open above; rachis glabrous; spikelets $\frac{1}{4}$ in.; rudimentary gl. like I and II of male, but smaller.

** *All infls. of simple bisexual spikes; spikelets glabrous.*

4. **P. semiteres,** *Benth. in Gen. Plant.* iii. 1113. Spathes 1–$1\frac{1}{2}$ in. always closed, fem. spikelets 2 or more. Chionachne Wightii, *Munro ex Benth. in Gen. Plant. l. c.* Tripsacum? semiteres, *Wall. Cat.* n. 8628.

The Deccan Peninsula; Palamcotta, *Wight.* Burma; Taong-dong hills, *Wallich.*

Rootstock creeping; stems 2–$2\frac{1}{2}$ ft., stiff, glabrous. *Leaves* 8–10 by $\frac{1}{8}$–$\frac{1}{4}$ in., rigid, tip setaceous, margins thickened; sheaths glabrous or hairy. *Spathe* 1–$1\frac{1}{2}$ in. *Spikes* $1\frac{1}{2}$–3 in., male part stout, rachis glabrous; spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. glabrous;

pedicelled spikelets adnate to the rachis; fem. spikelets rather longer, gl. of pedicelled 0 or minute.

5. **P. barbata,** *Stapf mss.*; branches of infl. many umbelled, spathes $\frac{1}{2}$ in. at length open, fem. spikelets solitary, margins of gl. I keeled tip entire. C. arundinacea, *Koen. ex Willd. Sp. Pl.* iv. 203 (*non Lamk.*). Coix barbata, *Roxb. Fl. Ind.* iii. 569; *Wall. Cat.* n. 8626; *Dalz. & Gibs. Bomb. Fl.* 289. C. crypsoides, *C. Muell. in Bot. Zeit.* xix. (1861) 334. C. gigantea, *Herb. Russ. ex Wall. Cat. l. c.* C. Koenigii, *Spreng Syst.* i. 228; *Thw. Enum. Pl. Zeyl.* 357. Chionachne barbata, *Br. in Benn. Pl. Rar. Jav.* 18; *Trim. Cat. Ceyl. Pl.* 106; *Aitchis. Cat. Panjab. Pl.* 157; *Duthie Grass. N.W. Ind.* 11, *Fodd. Grass. N. Ind.* 19. Ch. Koenigii, *Thw. Enum. Pl. Zeyl.* 369.

Hot and damp parts of INDIA, from the Panjab to Assam and Munnepore, and southward to CEYLON.—DISTRIB. Java.

Stems 3–5 ft., glabrous or with the leaves and sheaths bristly with tubercle-based hairs. *Leaves* 1–2 ft. by $\frac{1}{4}$–$\frac{3}{4}$ in., finely acuminate, margin thickened. *Spikes* 1–1$\frac{1}{2}$ in., rachis usually glabrous. *Male spikelets* $\frac{1}{4}$ in., glabrous or softly pilose, keels ciliolate; *fem.* $\frac{1}{8}$ in., glabrous, pale; gl. of pedicelled minute or 0.

6. **P. punctata,** *Stapf mss.*; branches of infl. few unequal, terminal subumbellate, outer spathes long green, gl. I of fem. spikelets constricted in the middle, then suddenly dilated into an ovoid obtuse claw, keels broad. Sclerachne punctata, *Br. in Benn. Pl. Rar. Jav.* 15, t. 4. Chionachne Massii, *Balans. in Journ. de Bot.* (Paris, 1890), 78. Coix sulcata, *Herb. Rottl.*

The DECCAN PENINSULA, *Rottler.*—DISTRIB. Java, Tonkin?

Stem slender, branched, glabrous, and leaves glabrous or sparsely hairy. *Leaves* 6–8 by $\frac{1}{4}$ in., linear-lanceolate, flaccid. *Spathes* of lower outer branches long, lanceolate. *Spikes* $\frac{1}{2}$ in.; male spikelets one pair, $\frac{1}{6}$ in., glabrous; fem. $\frac{1}{3}$ in., pale; gl. of pedicelled minute.

29*. **ZEA,** *Linn.*

A tall stout annual monœcious grass. *Leaves* broad, flat. *Spikelets* unisexual, males in terminal racemed spikes; fem. in solitary axillary stout sheathed spikes, rachis thick, inarticulate, spongy. *Male spikelets* 2-fld., 2-nate, a sessile and a pedicelled at each of the alternating teeth of the inarticulate rachis; glumes 4, acute; I and II subequal, membranous, empty; I enclosing the hyaline paleate III and IV. *Lodicules* fleshy. *Stamens* 3, anthers linear. *Fem. spikelets* 1-fld., sessile, densely crowded in many vertical series on the thick cylindric rachis; glumes 4, membranous, I and II very broad, obtuse or emarginate; III hyaline, paleate, empty; IV hyaline, often 2-fid. *Lodicules* 0. *Ovary* obliquely ovoid, plano-convex; style very long, 2-fid, arms papillose. *Grain* large, subglobose or flattened, surrounded by the marcescent gls.

Z. Mays, *Linn. Sp. Pl.* 971; *Beauv. Agrost.* 136, t. 24, f. 3; *Kunth Enum. Pl.* i. 19, *Suppl.* 15; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 3, 4. *Bonafous Hist. Nat. Mays* (*Paris*, 1836), t. 1–19; *Doell in Mart. Fl. Bras.* ii. II, 30, t. 11; *Roxb. Fl. Ind.* iii. 319; *Grah. Cat. Bomb. Pl.* 240; *Duthie Field & Gard. Crops.* 25, t. 5; *Miq. Fl. Ind. Bat.* iii. 477. Z. alba, americana & vulgaris, *Mill. Gard. Dict. Ed.* viii. n. 1, 2, 3. Z. segetalis, *Salisb. Prodr.* 28. Mays zea, *Gærtn. Fruct.* i. 6, t. i. f. 9.

Cultivated throughout the hotter parts of INDIA.—Native of Peru.

30. **DIMERIA,** *Br.*

Slender annual or perennial grasses. *Leaves* narrow. *Spikelets* 1-fld., unilateral on a single terminal spike or several racemed spikes, sessile or pedicelled, rachis inarticulate. *Glumes* 4; I linear, rigid; II broader compressed; III smaller, hyaline, empty; IV hyaline, bisexual, entire or 2-lobed, keeled, 1-nerved, usually awned; awn terminal or in the sinus, capillary, twisted at or below the middle. *Lodicules* minute or 0. *Stamens* 2, filaments short; anthers small. *Styles* distinct, stigmas short. *Grain* linear, laterally compressed, free.—Species 12 or 14, tropical Asiatic and Australian;—all want revision with more copious material.

* Spike solitary; spikelets conniving; gl. I erect, II not appressed to the rachis of the spike.

1. **D. pusilla,** *Thw. Enum. Pl. Zeyl.* 369; stem filiform, leaves short, rachis very slender compressed-trigonous, spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. long sessile or pedicelled, gl. II acuminate awned. *Hack. Monogr. Androp.* 78; *Trim. Cat. Ceyl. Pl.* 107.

The DECCAN PENINSULA and CEYLON (*CP.* 957.)

Very variable, 6–18 in. high.—Amongst the many forms the following appear the most distinct. I cannot satisfactorily identify them with Hackel's descriptions.

D. pusilla, proper; stems 6–8 in. filiform, rachis of spike filiform trigonous smooth or scaberulous on the angles, spikelets pedicelled, pedicel usually naked below villous upwards. D. pusilla, *Thw. l. c.* ?*Hack. Monog. Androp.* 78. Ceylon; at Kokotodua, *Gardner* (CP. 957 in part).—This and the following I have described from Thwaites' type specimens.

Var. *pallida,* Thw. mss.; stem as in *D. pusilla* proper, spikelets all sessile, or the lowest on the spike pedicelled, awn of gl. I shorter. ?*D. Thwaitesii,* Hack. l. c.—Ceylon at Damboul, *Thwaites* (CP. 3935).

Var. *elatior*; stem 12 in., stouter, somewhat branched, spike longer, rachis as broad as the shortly pedicelled spikelets keeled down the centre margins scaberulous, awn of gl. I sometimes as long as the gl.—CEYLON; at Trincomalee; *Glenie* (CP. 957).

Var. *Lawsoni,* stem short leafy, spike inclined, rachis broader than the sessile villous spikelets, margins ciliate, glume II shortly awned.—Malabar; Wynaad, *Lawson.*

2. **D. Kurzii,** stem 10–18 in. erect, rachis of spike rather broader than the sessile spikelets strongly ciliate, gl. II acute not awned, more or less ciliate.

BURMA, *Kurz* (n. 2741); Mergui, *Griffith.*

Much stouter than any form of *D. pusilla,* which the spike closely resembles; but the spikes are longer, $\frac{2}{3}$–2 in.; spikelets $\frac{1}{10}$ in. long.—The spikes are sometimes inclined or recurved as in the species with several on the peduncle, hence two spikes may occur. Kurz's specimens are very slender, 12–18 in. long; Griffiths' solitary one is in a very young state, with broader leaves sheathing the spike.

** Spikes 2–3; erect spreading or involute; gl. I erect or spreading; II usually closely appressed to the rachis.

† *Rachis capillary.*

3. **D. Hohenackeri,** *Hochst. ex Miq. in Verh. Ned. Inst.* III. iv. (1851) 35, stem capillary, spikes very slender, rachis filiform trigonous, spikelets distant narrow pedicelled, gl. II acuminate dorsally ciliate. *Hack. Monog. Androp.* 79; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vi. (1891), 189.

Psilostachys Hohenackeri, *Steud. Syn. Gram.* 413; *Hochst. in Flora* (1856), 90.

N. CANARA and MANGALORE, in rice fields, *Hohenacker, Talbot.*

Stem 6–8 in. *Leaves* short, upper sheathing. *Spikes* 1–$1\frac{1}{2}$ in.; rachis with scabrid angles. *Spikelets* $\frac{1}{10}$ in., awns twice as long; gl. I. very narrow, acuminate, nearly glabrous, at length divaricate.

†† *Rachis trigonous or linear, sometimes as broad or broader than gl. II, joints much shorter than the spikelets.*

4. **D. ornithopoda,** *Trin. Fund. Agrost.* 167, t. 14; spikes very slender, rachis flexuous, spikelets $\frac{1}{16}$ in. sessile or subsessile, glume II linear acute dorsally ciliate. *Hack. Monogr. Androp.* 81. D. filiformis, *Hochst. in Hohenack. Pl. Ind. Or.* n. 231. D. stipæformis, *Miq. Prolus. Fl. Jap.* 176; *Franch. & Sav. Enum. Pl. Jap.* i. 187. ?D. diandra, *Griff. Notul.* iii. 71, *Ic. Pl. Asiat.* t. 157, f. 2. D. psilobasis, *F. Muell. Fragm.* vii. 104. D. tenera, *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1833), 335; *Benth. Fl. Austral.* vii. 523. Didactylon simplex & ramosum, *Zoll. & Mor. Syst. Verz.* 100. Andropogon filiformis, *Roxb. Fl. Ind.* i. 256; *Steud. l. c.* 372. A. Roxburghianus, *Schult. Mant.* ii. 451. A. stipæformis, *Steud. l. c.* 377. Psilostachys filiformis, *Dalz. & Gibs. Bomb. Fl.* 305.—Dimeria, *Wall. Cat.* n. 8839, 8840.

Throughout INDIA; from Nepal and the Khasia Hills to the Deccan, Burma and the Nicobar Islds. (not in Ceylon).—DISTRIB. Malay Islds., Japan, Trop. Austral.

Annual, much branched, leafy. *Leaves* 1–3 in., erect; sheaths glabrous or pilose. *Spikes* 2, rarely 3; rachis about as broad as the spikelets, margins scaberulous, costa strong. *Spikelets* linear, acuminate, callus villous; gl. I slender, nearly glabrous; III short, acute; palea 0.—Hackel has 6 varieties of this species, of which more might be made.

5. **D. Woodrowii,** *Stapf in Hook. Ic. Pl.* t. 2312; spikes 2 circinately involute, rachis rigid glabrous, spikelets very shortly pedicelled, callus shortly bearded, gl. I and II subequal acute, III linear hyaline, IV shortly awned.

The CONCAN; Ratnagherry district, and near Goa, *Woodrow.*

Annual. *Stem* 3–6 in. slender, leafy to the top, simple or sparingly branched; upper internode (or peduncle) with its leaf abruptly deflexed after flowering. *Leaves* 2–3 in., linear, acuminate, erect, strict, glabrous or sparsely hairy; ligule very short, hyaline. *Spikes* $\frac{3}{4}$–1 in., at first erect, rachis dorsally convex, concave ventrally. *Spikelets* few, rather distant, suberect, divergent as the rachis incurves; gl. I glabrous or sparsely hairy; awn of IV about twice as long as its glume; palea 0.—A very peculiar species, at once recognized by the two spikelets forming together a hoop.

6. **D. connivens,** *Hack. Monogr. Androp.* 689; annual, rachis of spike nearly as broad as the spikelets ciliate, spikelets $\frac{1}{8}$ in. subsessile, callus minutely villous, gl. I very slender ciliate, II oblong-lanceolate acuminate dorsally ciliate.

CHOTA NAGPORE, alt. 2000 ft., *Clarke.*

Stems ascending, 6–10 in. *Leaves* short, erect. *Spikes* 1–$1\frac{3}{4}$ in.; rachis nearly straight, costate. *Spikelets* erect, closely imbricating; gl. I slender, sparsely ciliate; awn twice as long as the spikelet.

7. **D. Lehmanni,** *Hack. Monogr. Androp.* 82; spikes slender spreading, rachis undulate scabrid or ciliate, spikelets sessile $\frac{1}{8}$ in. long, callus very shortly bearded, gl. I and II subacute, I narrowly linear, keel ciliate,

III oblong. D. ornithopoda, *Thw. Enum.* 369. Pterygostachyum Lehmanni, *Nees ex Steud. Nom. Ed.* II. ii. 412, *Syn. Gram.* 413.

CEYLON, *Macrae*, *Walker*, *Thwaites*.

Annual, branched, 8–10 in. high. *Leaves* erect, flat, acuminate.

Var. α; glabrous, rachis of spike ciliate, spikelets awned. (C.P. 952.)

Var. β; rachis of spike scaberulous, spikelets not awned. (C.P. 955.)

8. **D. pubescens,** *Hack. Monogr. Androp.* 83; spikes stout spreading, margins of broad straight rachis ciliate, spikelets $\frac{1}{7}$ in. sessile silky, gl. I and II shortly acuminate, I narrowly linear with membranous margins $\frac{1}{3}$ longer than III. D. ornithopoda, *var.* γ, *Thw. Enum. Pl. Zeyl.* 369.

CEYLON, *Gardner*; Pasdoon Corle, *Thwaites* (C.P. 956).

Perennial, branched from the base, glabrous to villously hairy. *Racemes* 2–2½ in., often solitary and inclined; rachis flat, $\frac{1}{12}$ in. broad or less. *Spikelets* densely imbricate; gl. I and II silky all over; awn twice as long as the spikelet or longer.

9. **D. fuscescens,** *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1833) 335; spikes stout spreading, rachis undulate margins smooth or scaberulous, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. sessile, callus minute or 0, gl. I and II acute or acuminate, I narrowly linear much longer than III, margins of II broadly membranous. *Hack. Monogr. Androp.* 84; *Trim. Cat. Ceyl. Pl.* 107; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vi. (1891) 189. D. ornithopoda, *var.* β, *Thw. Enum. Pl. Zeyl.* 369.—Dimeria, *Wall. Cat.* n. 8841.

NEPAL, *Wallich*. KHASIA HILLS, alt. 4–5000 ft., *Griffith*, &c. TENASSERIM, *Helfer*. The CONCAN, *Lisboa*. CEYLON, *Gardner*, *Thwaites* (C.P. 3256).

Perennial, 2–3 ft. high, stout, simple or branched. *Leaves* glabrous or hairy. *Spikes* 2–4 in.; rachis compressed trigonous. *Spikelets* reddish-brown; awn twice as long as the gls.—The Tenasserim specimens are small and in a poor state.

10. **D. alata,** *Hook. f.*; spikes 2–3 rather stout, spikelets $\frac{1}{10}$ in. sessile glabrous callus naked, gl. I scaberulous, II dimidiate-ovate keel broadly winged, III nearly as long as II, awn 0. D. ornithopoda δ mutica, *Thw.* (*in part*).

CEYLON, *Thwaites* (C.P. 955 of 1864).

Annual. *Stems* 6–18 in., tufted, slender, erect. *Leaves*, 6–12 by $\frac{1}{8}$–$\frac{1}{5}$ in., erect, strict, narrowed to the base, and sheaths hirsute with long spreading hairs. *Spikes* 3 in., strict, spreading; rachis $\frac{1}{20}$ in., stout, straight, margins scaberulous. Gl. I divaricate; II appressed to the rachis, broadly hyaline; wing opaque, strongly ciliate; III oblong, ciliate, 1-nerved; IV obovate-oblong, ciliate.—The small glabrous spikelets and broadly winged gl. II distinguish this species from *D. fuscescens*.

*** Spikes 4–10 (rarely 3) digitate or fascicled.

11. **D. gracilis,** *Nees ex Steud. Syn. Gram.* 413; leaves not contracted above the sheath, spikes 3–10 long slender flexuous quite glabrous, rachis filiform subtrigonous, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in., pedicels long slender glabrous, callus bearded. *Hack. Monogr. Androp.* 88; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vi. (1891) 190. D. laxiuscula, *Thw. ex Trim. in Journ. Bot.* xxiii. (1885), 272, *Trim. Cat. Ceyl. Pl.* 107.

The CONCAN, *Law*; on the Ghats, *Lisboa*. CEYLON, *Macrae*, *Thwaites*, &c. (C.P. 3863).

Perennial, 1–2 ft. high, stout or slender. *Spikes* 1½–3 in., pale red-brown; gl. I and II, lanceolate, ciliate; I scabrid above the middle or all over; II with narrowly membranous margins; awn twice as long as the spikelet.

12. **D. leptorhachis,** *Hack. Monogr. Androp.* 89; leaves contracted

above the sheath, spikes slender, rachis filiform ciliolate at the nodes, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in., pedicels very short thickened, callus bearded. D. pilosissima, *Thw. Enum. Pl. Zeyl.* 369; *Trim. Cat. Ceyl. Pl.* 107 (*not of Trin.*).

TENASSERIM, *Helfer*, *Griffith* (*Kew distrib.* 6799). CEYLON; on Adam's Peak (C.P. 24, 3261).

Perennial, stout. *Leaves* glabrous or villous. *Racemes* 2–6 in.; rachis straight or flexuous; internodes $\frac{1}{6}$–$\frac{1}{3}$ in. in Tenasserim specimens, much shorter in Ceylon ones. *Spikelets* pale or dark, red-brown; gl. I and II acuminate, ciliate in Ceylon, scaberulous in Tenasserim; II with narrowly membranous margins.

31. **IMPERATA,** *Cyrill.*

Perennial, erect, often tall grasses. *Spikelets* 1–2-fld., in spiciform or thyrsiform silvery-silky panicles, binate, both pedicelled, upper fl. perfect, lower imperfect or 0. *Glumes* 4, membranous, awnless; I and II lanceolate, hairy; III much smaller, hyaline, glabrous; IV still smaller, hyaline, glabrous; palea hyaline, glabrous. *Stamens* 1–2; anthers large, linear. *Styles* connate at the base, stigmas linear. *Grain* small, oblong, free.—Species 5, tropical, chiefly American; 2 Asiatic, one also European.

1. **I. arundinacea,** *Cyrill. Pl. Rar. Neap. Fasc.* ii. 26, t. 11; panicle very narrow spiciform, branches short appressed, gl. I 5–9-nerved, stamens 2. *Br. Prodr.* 204; *Kunth Enum. Pl.* i. 477; *Hack. Monogr. Androp.* 92; *Steud. Syn. Gram.* 405; *Reichb. Ic. Fl. Germ.* t. 55; *Boiss. Fl. Orient.* v. 452; *Thw. Enum. Pl. Zeyl.* 369; *Trim. Cat. Ceyl. Pl.* 106; *Duthie Grass. N.W. Ind.* 14, *Indig. Fodd. Grass.* t. 15, *Fodd. Grass. N. Ind.* 22; *Aitchis. Cat. Punjab. Pl.* 173. I. Allang, *Jungh. in Tijdschr. Nat. Gesch.* vii. 295; *Steud. l. c.* 405 (Alang). I. condensata, *Steud. l. c.* 431. I. cylindrica, *Beauv. Agrost.* 165. I. filifolia, *Nees ex Steud. l. c.* I. Koenigii, *Beauv. Agrost.* 165; *Wall. Cat.* n. 8850. I. pedicellata, *Steud. in Flora*, xxix. (1846) 22, *Syn. Gram. l. c.* I. Sieberi, *Opiz. Natural.* x. (1825) 190. I. Sisca, *Beauv. ex Steud. Nom. Ed.* II. i. 805. I. Thunbergii, *Nees ex Wall. Cat.* n. 8851. Saccharum cylindricum, *Lamk. Encycl.* i. 594; *Roxb. Fl. Ind.* i. 234; *Grah. Cat. Bomb. Pl.* 239; *Griff. Notul.* iii. 80. S. diandrum, *Koen. ex Retz. Obs.* v. 16. S. europæum & S. indum, *Pers. Syn.* i. 103. S. Koenigii, *Retz. Obs.* v. 16. S. spicatum, *Burm. ex Kunth l. c.* S. laguroides, *Pourr. in Mem. Acad. Toul.* iii. (1788) 326. S. Ravennæ, *Bieb. Fl. Taur. Cauc.* iii. 51. Lagurus cylindricus, *Linn. Syst. Nat. Ed.* x. 878. Calamagrostis Lagurus, *Koel. Descr. Gram.* 112; *Host Gram. Austr.* iv. t. 40.

Hotter parts of INDIA, from the Panjab southward and eastward to Malacca and Ceylon.—DISTRIB. All warm countries.

Rootstock creeping. *Stem* 1–3 ft., solid, nodes glabrous or bearded. *Leaves* erect, often exceeding the stem. *Panicle* 3–8 in., silvery with dark anthers and stigmas. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in., callus-hairs about twice as long as the gls.; gl. I rather thickened towards the base, dorsally hairy, tip obtuse; II as long as I, 3–7-nerved; III = $\frac{1}{3}$–$\frac{1}{2}$ II, oblong, irregularly toothed, nerveless; IV ovate, acute, toothed, faintly 1-nerved or nerveless; palea about half as long as the gl., quadrate, retuse or toothed, nerveless, glabrous.—Hackel distinguishes the Indian form as var. *Koenigii*, having villous nodes and broader less rigid leaves, but some of the Indian specimens appear to me quite like the Western.

Var. *latifolia*; stem 3–4 ft. very robust, nodes glabrous, leaves long $\frac{1}{2}$–$\frac{2}{3}$ in. broad, palea of gl. IV with long-ciliate lobes.—Tropical Himalaya, from Kumaon to Assam.

2. **I. exaltata,** *Brongn. Voy. Coq. Bot.* 101 (*excl. Syn.*); panicle thyrsiform, lower branches elongate, gl. I 3–5-nerved, stamen 1. *Hack. Monogr. Androp.* 99. I. caudata, *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1833) 331. ? I. jaculatoria, *Roem. & Sch. Syst.* ii. 289. I. ramosa, *Anderss. in Œfvers. Vet. Akad. Stockh.* (1855) 158. Saccharum Alopecurus, *Nees in Hook. Kew Journ.* ii. (1850) 100; *Steud. Syn. Gram.* 406. S. caudatum, *Mey. Prim. Fl. Esseq.* 68. S. confertum, *Presl Rel. Hænk.* i. 346. S. contractum & dubium, *H. B. & K. Nov. Gen. et sp.* 182, 183. ? S. jaculatorium, *Lour. Fl. Cochinch.* 53; *Poiret Encycl. Suppl.* ii. 70. S. macilentum, *Chauv. ex Steud. l. c.* S. negrosense, *Steud. l. c.* Anatherum porto-ricense, *Spreng. Syst.* i. 290. A. caudatum, *Schult. Mant.* ii. 445. Syllepis polystachya, *Fourn. ex Hack. in Mart. Fl. Bras.* ii. III. 251.

SINGAPORE, *Cuming*. BURMA; Mergui, *Griffith*.—DISTRIB. Malaya, N. Hebrides, Am. trop.

Stem tall, up to 7 ft., slender, fistular, glabrous, nodes glabrous. *Leaves* 2–3 ft. by $\frac{3}{4}$–1 in., linear, finely acuminate, smooth, glabrous or sparsely pubescent; sheath glabrous; ligule very short. *Panicle* 12–18 in., 4–5 in. broad at the base, narrowly subpyramidal; rachis slender; lower branches 3–4 in. long, branchlets and pedicels ciliate. *Spikelets* $\frac{1}{6}$–$\frac{1}{5}$ in., like those of *I. arundinacea*, but gl. I and II fewer nerved; III = $\frac{1}{2}$ II oblong, deeply irregularly toothed above the middle, glabrous, nerve very slender; IV cuspidately lanceolate from an ovate base, quite entire, glabrous; palea quadrate, many-toothed, glabrous.

32. MISCANTHUS, *Anderss.*

Tall perennial grasses. *Spikes* long, simple and branched, very slender, crowded at the top of the peduncle into a nodding fan-shaped corymb; rachis obscurely jointed. *Spikelets* very numerous, in unequally pedicelled pairs, 1-fld., dorsally subcompressed, one or both usually awned, callus with long silky hairs. *Glumes* 4; I chartaceous, nearly flat with narrow incurved margins; II similar but more convex; III hyaline, ovate, epaleate; IV hyaline, 2-fid or 2-toothed, with a long awn (rarely short or 0) in the sinus; palea minute. *Lodicules* cuneate. *Stamens* 2–3. *Styles* free, stigmas rather short. *Grain* linear-oblong, free.—Species 5–6, Asiatic and Polynesian.

1. **M. nepalensis,** *Hack. Monogr. Androp.* 104; spikes very many densely crowded 5–7 in., hairs of callus much longer than the spikelet. Eulalia nepalensis, *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1833) 333, *Sp. Gram. Ic.* t. 332. Pollinia nepalensis, *Benth. ex Duthie Grass. N. W. Ind.* 16.—Erianthus, *Wall. Cat.* n. 8848.

TEMPERATE HIMALAYA; from Garwhal to Bhotan, alt. 5–7500 ft., *Wallich*, &c. KHASIA HILLS, alt. 4–5000 ft. NAGA HILLS, *Prain*.

Stem 3–6 ft., as thick as a goose-quill in large plants. *Leaves* 6–18 in. by $\frac{1}{3}$–$\frac{1}{2}$ in., margins smooth, midrib stout; ligule rounded. *Spikes* flexuous; rachis capillary, glabrous; pedicels $\frac{1}{6}$ in. *Spikelets* $\frac{1}{14}$ in. long, purplish or golden yellow, shining; gl. I and II minutely 2-toothed.

2. **M. nudipes,** *Hack. Monogr. Androp.* 109; spikes few 2–3 in., hairs of callus not longer than the spikelet. Erianthus nudipes, *Griseb. in Nachr. Akad. Wiss. Goett.* (1868) 92.

SIKKIM HIMALAYA, alt. 9–12,000 ft., *J. D. H.* UPPER ASSAM; Mishmi Hills, *Griffith*.

Much smaller than *M. nepalensis*, 2–3 ft. high, with leaves 4–10 in. long, the margins of which are smooth as in that plant; spikelets very much longer, ⅛–⅕ in. long, and narrower.

33. SPODIOPOGON, *Trin.*

Tall grasses. *Leaves* often long-petioled. *Spikelets* 1–2-fld., panicled, laterally compressed or subterete, 2–3-nate, lower sessile male, upper bisexual, rachis jointed. *Glumes* 4; I and II subequal; I lanceolate, 5–9-nerved, tip acuminate or toothed; II membranous, lanceolate, 3–7-nerved; III hyaline, paleate or not, 3-androus or empty; IV 2-fid or 2-partite with a very slender exserted awn in the sinus; palea shorter. *Lodicules* cuneate. *Anthers* linear. *Stigmas* linear. *Grain* free, narrowly fusiform.—Species about 5, Asiatic.

1. **S. albidus,** *Benth. in Journ. Linn. Soc.* xix. (1881) 66; decumbent, leaves long-petioled broad flaccid, panicle narrow, spikelets 2-fld. laterally compressed, silkily villous, gl. I membranous. *Hack. Monogr. Androp.* 185. Andropogon albidus, *Hb. Heyne.* A. rhizophorus, *Steud. Syn. Gram.* 381; *Duthie Fodd. Grass. N. Ind.* 26.—Andropogon? *Wall. Cat.* n. 8821.

RAJPOOTANA; on Mt. Aboo, *Duthie.* DECCAN PENINSULA, from the Concan to Travancore.

A weak struggling tufted branched annual?, 2–4 feet; stem very slender, much branched, leafy. *Leaves* 6–10 by ¼–¾ in., flaccid, linear-lanceolate, acuminate, 1-nerved, usually suddenly narrowed into a slender petiole 1–3 in. long; sheath 3–5 in.; ligule oblong, glabrous. *Panicle* at first enclosed in a long narrow spathaceous leaf-sheath; rachis compressed, ciliate. *Spikelets* about ⅙ in. long, white; shortly pedicelled. *Gl.* I minutely 2-mucronate, 7-nerved; II broader, much compressed; III truncate tip erose.

2. **S. dubius,** *Hack. Monogr. Androp.* 186; erect, leaves sessile long narrow and sheaths softly hairy, panicle narrow, spikelets 1-fld. silkily villous, gl. I chartaceous 7–9-nerved.—Andropogon, n. 16, *Herb. H. f. & T.*

TEMPERATE HIMALAYA; from Kashmir to Garwhal, alt. 6–8000 ft., *Thomson*, &c.

Perennial. *Stem* 2–4 ft., solid, as thick as a goose-quill, quite smooth. *Leaves* 12–18 by ¼–⅓ in., smooth hairy or villous, base villous, margins scaberulous, base villous, midrib broad, white; sheath glabrous; ligule densely villous. *Panicle* 6–8 in., narrowly oblong, erect, very dense-fld., pale; pedicels very short. *Spikelets* ⅕ in.; gl. I acuminate, dorsally convex, margins narrowly incurved; II as long, subchartaceous, 3–5-nerved, hairy dorsally, sometimes obtuse and apiculate; III oblong, obtuse, hyaline, 1-nerved ciliate; IV shorter than II, cleft into lanceolate segments with a slender interposed awn as long as the spikelet, 3-nerved below the middle; palea lanceolate, 2-fid.

3. **S. cotulifer,** *Hack. Monogr. Androp.* 187; tall, erect, leaves long sessile and petioled, panicle lax effuse branches and long capillary pedicels short subclavate, spikelets 1-fld. lanceolate terete sparsely hairy, gl. I and II coriaceous strongly nerved. Eulalia cotulifera, *Munro ex Miq. Prolus. Fl. Jap.* 177; *Franch. & Sav. En. Pl. Jap.* ii. 189. Miscanthus cotulifer, *Benth. in Journ. Linn. Soc.* xix. (1881) 65. Eccoilopus andropogonoides, *Steud. Syn. Gram.* 124. Andropogon cotulifer, *Thunb. Fl. Jap.* 41.

WESTERN TEMPERATE HIMALAYA, alt. 4–6000 ft., from Kashmir, *Clarke*, to

Garwhal, *Jacquemont, Duthie.* KHASIA HILLS, alt. 3–4000 ft., *J. D. H. & T. T.*—DISTRIB. China, Japan.

Perennial. *Stem* 3–8 ft. or more from a woody branched stock, as thick as a swan's quill or less. *Leaves* 2–3 ft. by $\frac{1}{2}$–$\frac{2}{3}$ in.; sheath long, grooved; ligule short. *Panicle* 6–12 in., rachis slender, terete, branches whorled, capillary, lower 1–3 in., lax-fld., flowering towards the ends; pedicels $\frac{1}{10}$–$\frac{1}{8}$ in., clavellate, tips cupped. *Spikelets* $\frac{1}{5}$ in., green; tall callus bearded; gl. I and II very strongly 7–9-nerved, nerves scaberulous, tips 2-dentate and very shortly awned; III oblong, tip rounded, scaberulous above the middle, not ciliate; palea lanceolate, subciliate; IV glabrous, cleft to below the middle into setiform lobes, awn twice as long as the spikelet; palea large, broadly ovate, obtuse, ciliate, nerveless.—A peculiar grass very unlike the other species.

34. **POLLINIA,** *Trin.*

Annual or perennial grasses. *Spikes* subdigitately approximate or fascicled, hirsute silky or ciliate, rachis fragile. *Spikelets* binate a sessile and pedicelled rarely both pedicelled, 1-fld. or the sessile 2-fld. *Glumes* 4, I membranous or coriaceous, dorsally flattened or concave, truncate often narrowly, or tip 2-toothed, margins narrowly inflexed throughout its length; II as long, usually laterally compressed, keeled, acute, rarely awned; III hyaline, ciliate, rarely neuter or male, paleate (sometimes represented by a gl.-like palea); IV very short, hyaline, entire 2-fid or 2-auricled or reduced to a dilated base of the long twisted exserted awn; palea small or 0. *Lodicules* obliquely truncate. *Stamens* 3, rarely 2. *Stigmas* long. *Grain* free.—Species about 30, tropical and subtropical of the Old World.

The characters by which *Pollinia* is distinguished from *Ischæmum* are very unsatisfactory. The colour of the hairs of the spikes in Sect. *Eulalia* cannot be altogether depended upon; nor can the sexuality of the spikelets and presence or absence of gl. III be in Sect. *Leptatherum*. The apparent replacement of gl. III in some species by a palea as long as gl. I and concave towards it, first observed and commented on by Hackel (Androp. 171) is a very curious departure from the normal condition of the spikelet in *Andropogoneæ*. It is not confined to *Pollinia*.

Sect. I. *Stem* erect. *Leaves* not conspicuously constricted or petioled above the sheath. *Gl.* I as long as II, narrowly truncate; II not broadly truncate; III or its palea present.

* Glume II of sessile spikelets awned. Basal sheaths of stem naked.

1. **P. articulata,** *Trin. in Bull. Sc. Acad. Petersb.* (1836) 71; annual, very slender, leaves usually filiform, spikes usually very many, hairs of rachis white, spikelets $\frac{1}{12}$–$\frac{1}{10}$ in. brown, gl. I narrowly truncate, keels villous below with white hairs, II glabrous except the margins, III (? palea of gl. IV) ovate obtuse, IV narrowly oblong 2-fid or 2-toothed, awn very long ciliate, palea short broad. *Hack. Monogr. Androp.* 153; *Benth. Fl. Hongk.* vii. 525. P. setifolia, *Nees in Hook. Kew Journ.* ii. (1850) 101. Pogonatherum contortum, *Brongn. Bot. Voy. Coq.* 90, t. 17. Erianthus articulatus, *F. Muell. Fragm. Phyt. Austral.* viii. 118. Eulalia concinna, *Nees ex Steud. Syn. Gram.* 412. Andropogon koretrostachys, *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1833) 273. A. brunneus, *Heyne in Herb. Rottler.* A. asthenostachys, *Steud. l. c.* 381.—Andropogon, *Wall. Cat.* n. 8813, 8814.

Plains of lower Gangetic Valley and Behar, ascending to 3000 ft. SIKKIM and KHASIA HILLS. CHOTA NAGPUR, *Gamble.* NILGHIRI HILLS; the Wynaad, *Heyne.* BURMA, *Wallich.*—DISTRIB. Malaya, China, Australia.

Stem 1–2 ft., erect, tufted, nodes glabrous. *Leaves* 6–18 in., erect, flexuous, $\frac{1}{11}$–$\frac{1}{10}$ in. broad (except in Wallich's n. 8813), glabrous. *Peduncle* filiform. *Spikes* ¾–2½ in., fascicled, very slender, erect. *Spikelets* amongst the smallest of the genus; gl. IV very variable in length and in depth of lobing, sometimes subentire, awn sometimes 1 in. long.—Hackel has two subspecies, one with the nodes of the spike longer and not disarticulating, which includes the Burmese plant of Wallich, n. 8814, and the Sikkim plant; the other has fragile spikes with much shorter nodes, to which Wallich's Burmese, n. 8813 belongs; this latter is a much taller stouter plant with leaves ¼ in. broad and stems thicker than a crow-quill.—What Hackel describes as gl. III appears to me to be the palea of gl. IV, for it surrounds the ovary.

Var. *β, pedicellata,* Hack. mss.; both spikelets long pedicelled. Kumaon, *Duthie.*

2. **P. pallens,** *Hack. Monogr. Androp.* 156; leaves very slender, spikes 5–10 silkily hairy white, rachis slender, spikelets ⅛ in., gl. I narrow membranous bicuspidate shortly villous, II laxly villous, III oblong obtuse ciliate, IV narrow 2-fid, awn 2–3 times as long as the spikelet.

KHASIA HILLS, alt. 5000 ft., *Griffith,* &c.—DISTRIB. China.

Stem 2–3 ft., slender; nodes glabrous. *Leaves* 12–20 by $\frac{1}{10}$–⅙ in., hairy beneath, margins revolute, tips filiform. *Spikes* 2–4 in., slender, silkily hairy. *Spikelets* narrowly lanceolate. *Gl.* I 2-nerved; II with the capillary awn very variable in length, keel and margins ciliate; III oblong, obtuse, ciliate; IV ciliate, oblanceolate, adnate portion of awn forked about half-way down; palea broadly ovate or orbicular, entire, not ciliate.

** Glume II of sessile spikelet not awned.

† Basal sheaths of stem naked.

§ *Spikelets* ⅛–¼ in.

3. **P. quadrinervis,** *Hack. Monogr. Androp.* 158; spikes 3–6 and pedicels villous with long silvery-grey hairs, spikelets ⅕–¼ in. oblong-lanceolate subacute, gl. I dorsally concave 4-nerved (often obscurely), III glabrous, IV short broadly deeply obcordate, awn 3–4 times as long as the spikelet, palea short broad. P. villosa, *Munro in Benth. Fl. Hongkong,* 420 (*non Spreng.*). Erianthus tristachyus, *Nees in Hook. & Arn. Bot. Beech. Voy.* 241; *et in Pl. Meyer.* 183 (*excl. Syn.*).—Andropogon, *Wall. Cat.* n. 8808.

SUBTROPICAL HIMALAYA; from Simla to Sikkim, the MISHMI, and KHASIA HILLS, alt. 3–5000 ft., *Clarke.* PEGU, alt. 4–6000 ft., *Kurz.*—DISTRIB. China.

Stem 1–2 ft., leafy upwards, nodes glabrous. *Leaves* narrow, glabrous or hairy beneath, or on both surfaces, or with the sheath hirsute, tips finely acuminate; ligule oblong. *Spikes* 3–5, 2–6 in., erect or flexuous. *Spikelets* pale yellow-brown; callus hairs long white; gl. I with hispid keels above, tip contracted minutely truncate, margins rather broadly inflexed; II acute, minutely apiculate, sub 3-nerved, keel smooth, margins ciliate; III linear-oblong, long-ciliate above; IV with the adnate awn forked towards the base, lobes rounded ciliolate; palea lanceolate, ciliolate.—Nees, as Hackel observes, errs in describing the base of the stem as rufous-haired. The Khasia plant has softly villous foliage and has paler spikes, and closely resembles *P. speciosa,* var. *heterotricha.*

Var. *Wightii;* stem tall stout silky below the panicle, leaves ⅓ in. broad acute, spikes 3–7 in., spikelets nearly ¼ in., gl. I 2–4-nerved, IV cuneately obovate broadly

2-lobed.—Pulney Mts., *Wight*. Possibly a species, differing from *quadrinervis* in the broad leaves which have not setaceous tips and in the broad gl. IV.

4. **P. hirtifolia,** *Hack. Monogr. Androp.* 165; spikes few, rachis and pedicels villous with long pale violet hairs, spikelets $\frac{1}{8}$ in. linear-oblong, gl. I dorsally slightly concave obscurely 4-nerved, keels laxly villous with long hairs, gl. IV short broadly obovate-oblong 2-lobed, awn several times longer than the spikelet glabrous, palea minute.

WESTERN TEMPERATE HIMALAYA, alt. 5500–8000 ft., from Simla, *Huegel*, to Kumaon, *Strachey & Winterb.* (n. 925).

Stem 2–3 ft., leafy, nodes glabrous. *Leaves* 8–18 in., very narrow, more or less hirsute beneath or on both surfaces, tips filiform; ligule very short, long-bearded. *Spikes* 3–8, rather distant, 3–7 in. long, joints and pedicels rather stout, hairs shorter than the pale brown spikelets; gl. I chartaceous, shining, tip entire, obtuse or truncate, keels ciliate aculeate above; II obtuse, glabrous except the ciliate margins, keel smooth; III lanceolate, ciliate, nerveless; IV ciliate 3-nerved; palea broadly ovate, glabrous.—The joints of the rachis are decidedly obliquely truncate. Very near *P. quadrinervis*, of which it may be a variety.

5. **P. Thwaitesii,** *Hack. Monog. Androp.* 163; stems short, leaves chiefly radical very slender subdistichous, spikes 2–3, rachis and pedicels villous with white hairs, spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. lanceolate, gls. I concolorous acute 2-nerved, IV linear 2-fid lobes narrow acute, awn more than twice as long as the spikelets, palea minute. P. tristachya, var. *Thw. Enum.* 368; var. distachya, *Trim. Cat. Ceyl. Pl.* 106.

CEYLON; in swamps, alt. 7000 ft., *Gardner*, *Thwaites*.

Stem short, lengthened downwards and nodose, above densely clothed for 1–3 in. with subdistichously imbricating leaf-sheaths, 1–2 in. long, which are produced into slender wiry erect convolute leaves 6–12 in. long; ligule minute. *Spikes* 2–3 in. long. *Gl.* I pale brown to the tip, dorsally concave, margins narrowly incurved; keels villous; II lanceolate, acute, keel hairy below scaberulous above; III linear-lanceolate, acute, convolute, obsoletely 2-nerved, tip ciliate; IV nearly as long, glabrous; palea ovate, ciliolate.

6. **P. mollis,** *Hack. Monogr. Androp.* 161; spikes usually many, rachis and pedicels villous with very long silvery-white hairs, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. narrowly lanceolate acuminate dorsally flat faintly 2-nerved, IV narrow shortly 2-fid or 2-toothed, awn 3- or more times longer than the spikelet, palea minute. Erianthus mollis, *Griseb. in Goett. Nachr.* 1868, 92. Eulalia mollis, *Munro mss.*

TEMPERATE HIMALAYA; from Kashmir to Sikkim, alt. 5–8000 ft.

Stem 10–12 in., slender, tufted, leafy chiefly at the base. *Leaves* 2–3 in., narrowly lanceolate; sheath glabrous or ciliate; ligule very short, bearded. *Spikes* 3–10, 1–2 in. long, crowded, flexuous, joints and pedicels slender beautifully silvery-silky with very long hairs. *Spikelets* pale; gl. I thin, villous, hairs much longer than itself, lower half dark brown, upper pale, tip obscurely notched or 2-mucronate; II subacute, dorsally sparsely hairy, keel smooth, margins ciliate; III lanceolate, hyaline and ciliate in the upper half, 1-nerved; IV much shorter, awn very slender; palea glabrous.—Almost intermediate between *Pollinia* and *Erianthus*, Hack. l. c. 162.

§§ *Spikelets* $\frac{1}{10}$–$\frac{1}{8}$ in.

7. **P. argentea,** *Trin. in Bull. Sc. Acad. Petersb.* i. (1836) 71; spikes many, rachis and pedicels villous with silvery hairs, spikelets $\frac{1}{10}$ in. linear-oblong pale, gl. I dorsally flat nerveless membranous above the middle

villous or glabrate below it, IV linear 2-fid, lobes narrow acute, awn several times longer than the spikelet ciliate, palea 0. *Hack. Monogr. Androp.* 162. P. tristachya, *Thw. Enum. Pl. Zeyl.* 368 (*in part*); *Benth. Fl. Austral.* vii. 527. *Duthie Fodd. Grass. N.W. Ind.* 26, t. 53. Eulalia argentea, *Brongn. Voy. Coq. Bot.* 92. Erianthus rufus, *Nees ex Steud. Syn. Gram.* 409 (*partim*). E. hexastachyus, *Hochst. in Hohen. Pl. Ind. Or.* n. 279; *Miq. Anal. Bot. Ind* ii. 35. E. Roxburghii, *F. Muell. Fragm. Phyt.* viii. 117. E. tristachyus, *Nees in Herb. Strach. & Winterb.* No. 4; *in Hook. & Arn. Bot. Beech. Voy.* 241. Saccharum rufum & tristachyum (*in part*), *Steud. l. c.* 408. Andropogon minutiflorus & hexastachyus, *Steud. l. c.* 379, 380. A. trispicatus, *Schult. Mant.* ii. 452. A. tristachyus, *Roxb. Fl. Ind.* i. 256.—Andropogon, *Wall. Cat.* n. 8811.

TROPICAL HIMALAYA, alt. 1–5000 ft., from Kumaon eastwards to the KHASIA HILLS, BENGAL, BEHAR and southward to CEYLON.—DISTRIB. Malaya, Australia.

Stem 2–3 ft. high, leafy, or in small specimens leafy at the base chiefly. *Leaves* 12–18 in., rarely ¼ in. broad, glabrous or sparsely hairy; ligule very short, bearded. *Spikes* 2–12, 1½–6 in. long, flexuous; rachis and pedicels slender. *Gl.* I thin, pale brown below, pale yellow above the middle; II and III as in *P. hirtifolia*, but IV longer and narrower.—Roxburgh describes this as an annual delicate beautiful species, but most of the specimens appear to be perennial. The very small spikelets resemble those of *P. articulata.*

8. **P. fimbriata,** *Hack. Monogr. Androp.* 164; stems very slender shining, leaves very narrow, spikes 2–4 villous with white hairs, joints very short slender, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in., gl. I lanceolate truncate nerveless dorsally smooth depressed, keels ciliate, II obtuse, III oblong-lanceolate ciliate, IV narrow 2-fid, awn much longer than the spikelets ciliate, palea very minute or 0.

WESTERN HIMALAYA, Simla, alt. 7–8000 ft., *Thomson.* MALABAR and CONCAN, *Stocks, &c.* PEGU, *M'Lelland.*

Annual. *Stem* 1–2 ft., internodes much longer than the sheaths, nodes glabrous. *Leaves* 6–10 by $\frac{1}{6}$ in., flaccid, sparsely hairy above; sheath glabrous; ligule a ciliolate ridge. *Spikes* 1–3 in., long-peduncled, flexuous, pale; rachis slender, joints densely villous; gl. I with villous keels above, obscurely 2-toothed; IV with oblong ciliate lobes.—Hackel describes gl. IV. as epaleate, but I find a minute palea. He suspects that *Andropogon conjugatus*, Roxb. (Fl. Ind. i. 255) to be closely allied, but Roxburgh describes his plant as the smallest of the genus, with minute leaves, the two spikes as exactly paired and touching one another; which is not the case in *P. fimbriata.*

†† Basal sheaths of stem villous or woolly.

9. **P. phæothrix,** *Hack. Monogr. Androp.* 168; basal sheaths rusty-tomentose, leaves very slender, spikes 2–4, spikelets $\frac{1}{6}$–$\frac{1}{5}$ in., gl. I broadly or narrowly truncate nerveless or faintly 2-nerved dorsally hispidly villous, IV short deeply 2-fid segments narrow, palea small obovate ciliate. P. Cumingii, *Thw. Enum. Pl. Zeyl.* 368; *Trim. Cat. Ceyl. Pl.* 106 (*non Nees*). P. argentea, *Balans. in Journ. de Bot.* (*Paris*, 1890) 81. Erianthus aureus, *Nees in Wight Cat.* n. 1690 (*excl. syn.*); *Steud. Syn. Gram.* (*sub Eul. nepalensis*). E. Cumingii, *F. Muell. Fragm.* viii. 118. E. tristachyus, *Nees l. c.* n. 1691. Andropogon pilosus, *Willd. ex Wight l. c.* 1690. A. brunneus, *Heyne in Herb. Rottl.*

NILGHIRI HILLS, alt. 6–7000 ft. *Wight*, &c. CEYLON, in the Central Provinces. —DISTRIB. Tonkin.

Stem 18–24 in., slender; peduncle silky under the panicle. *Leaves* 6–18 in., rarely ⅙ in. broad, acute, short and filiform in some Nilghiri specimens, glabrous or hairy; ligule short, bearded. *Spikes* 1–3 in., stout, dark brown, rather distant, joints about ½ as long as the spikelets. *Spikelets* linear-oblong; gl. I dorsally densely villous chiefly at the sides and above; II tip narrowly truncate, keel obscure hairy about the middle; III as long as I, nerveless, ciliate above the middle; IV half as long, awn stout inserted in the cleft, broadening out and vanishing.—A Tonkin specimen is 3½ ft. with broader leaves and white hairs on the rachis.

10. **P. birmanica,** *Hook. f.*; tall, stout from a very stout rootstock with rusty-woolly basal sheath, leaves narrow glabrous, spikes few 3–6 in. strict erect, rachis stout villous, spikelets ⅕ in. oblong, gl. I narrowly truncate nerveless, IV very narrow 2-fid eciliate.

BURMA; Yomah, *Kurz.*

Rootstock as large as a walnut. *Stem* 4–5 ft., villous below the panicle; nodes pubescent. *Leaves* 10–18 in., smooth, glabrous. *Spikes* closely appressed to the rachis, villous with golden-brown hairs; joints as long as the spikelet, obliquely truncate. *Spikelets* dark brown; gl. I dorsally flat, sparsely villous, sides copiously so, margins rather broadly incurved from base to apex; II narrowly oblong, obscurely keeled, sides villous; III oblong-lanceolate, hyaline, ciliate; IV very small, awn ⅔ in. long; palea orbicular-ovate, long-ciliate.—Possibly only a very large form of *P. phæothrix*, with a stout rootstock, and rachis of the spikes narrower.

11. **P. speciosa,** *Hack. Monogr. Androp.* 159; tall, stout, basal sheaths clothed with pale yellow-brown wool, leaves narrow usually villously hirsute, spikes 3–5 often very long slender flexuous villous with pale yellow-brown hairs, spikelets ⅙ in. oblong, gl. I narrowly truncate faintly 4-nerved back and sides villous, IV narrowly 2-fid lobes acute eciliate, awn tortuous and twisted, palea very small suborbicular. Erianthus speciosus, *Debeaux in Act. Linn. Soc. Bord.* xxxii. (1878) 53.—Erianthus, No. 9, *Herb. Ind. Or. Hf. & T.*

KHASIA HILLS, alt. 5–8000 ft., common. NAGA HILLS, *Prain.*—DISTRIB. China.

Stems 3–4 ft., densely tufted, peduncle silky below the panicle. *Leaves* 12–18 by ⅙–⅓ in., densely villously tomentose on both surfaces in the Khasia specimens (var. *heterotricha*, Hack. mss.), tips filiform; ligule a long beard. *Spikes* 3–8 in., joints slender = ½ the spikelet. *Spikelets* with sometimes parti-coloured hairs, those of the callus white or concolorous; gl. I narrowly oblong-lanceolate; II subacute, dorsally sparsely hairy, margins ciliate; III linear-oblong, ciliate; IV shorter, linear-oblong, lobes shorter than the gl.; awn several times longer than the spikelet, vanishing downwards in the gl. *Lodicules* 2-fid, ciliate.—The Naga Hill specimen has glabrous leaves like the Chinese. Closely resembles *P. hirtiflora* and *quadrinervis*, differing in the woolly basal sheaths, colour of hairs of spike, and narrow gl. IV. In Sampson's Chinese specimens preserved at Kew (the plant described by Hackel) the base of the stem is wanting; but in fine ones collected at Ichang by Henry, the basal sheaths are woolly, exactly as in the Khasian plant.

12. **P. velutina,** *Hack. Monogr, Androp.* 169; tall, stout, basal sheaths villous with long silky hairs, leaves narrow glabrous, spikes 3–8 long, villous with long pale yellow-brown hairs, spikelets ⅙ in. oblong, gl. I narrowly truncate 2-cuspidate 4-nerved, back and sides villous, IV narrowly 2-fid or 2-toothed eciliate, awn tortuous and twisted, palea broadly ovate shortly ciliate.

KHASIA HILLS, alt. 4–5000 ft. *J. D. H. & T. T., Clarke.*

Except in the silky villous clothing of the basal sheaths of the stem, this hardly differs from glabrous states of *P. speciosa*; but whereas the leaves of *speciosa* are (as far as has been observed) always hirsutely villous in the Khasia, those of *velutina* are always glabrous. Gl. IV varies in the breadth and depth of its lobes which are obtuse or acute.—Duthie (Grass. N.W. Ind 15) gives this as a N.W. plant, but I have seen no specimens from west of the Khasia Hills.

Sect. II. *Stem* decumbent below. *Leaves* not contracted or petioled on the sheath. Gl. I shorter than II, truncate; II broadly truncate; III absent or present.

13. **P. Cumingii,** *Nees in Hook. Kew Journ.* ii. (1850) 98; leaves short flat, spikes 2–4 distant slender densely villous with red-brown hairs, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. oblong, gl. I dorsally hairy hairs longer than the gl., III 0, IV minute 2-fid, awn very slender 3–4 times as long as the gl., palea minute. *Hack. Monogr. Androp.* 167 (*excl.* var. fulva). *Steud. Syn. Gram.* 373. P. fulva, *var.* leptophylla, *Benth. Fl. Austral.* vii. 526. Andropogon aureo-fulvus, *Steud. l. c.* 373. A. Leschenaultianus, *Decne. Herb. Timor. Descr.* 29.

UPPER GANGETIC PLAIN; Moradabad, *Thomson.* KUMAON; at Dehra-dun, *Duthie.* SIKKIM TERAI, *Clarke.*—DISTRIB. E. ASIA, Malaya, Australia.

Stem 12–18 in., hardly thicker than a sparrow's quill, tufted, decumbent below with ascending leafy branches; nodes sometimes proliferous. *Leaves* 2–4 in., linear-lanceolate, finely acuminate; lower sheaths hairy; ligule 0 or obscure, hairy. *Peduncle* filiform. *Spikes* slender, $1\frac{1}{2}$–2 in., subdigitate; joints villous, shorter than the spikelets. *Spikelets* with a shortly bearded callus; gl. I truncate, often 2-cuspidate, 2-nerved or nerveless, margins and tip ciliate; II longer and broader than I, truncate, keel ciliate above the middle, sometimes shortly awned; III absent in all the specimens which I have examined; IV very variable, narrow with subulate lobes in the Moradabad specimen, most minute and 2-toothed in the Sikkim and Kumaon ones, with lanceolate subulate lobes in Tonkin ones.

14. **P. Ridleyi,** *Hack. in Œster. Bot. Zeitschr.* xl. i. (1891) 7; spikes 3–6 digitate, spikelets $\frac{1}{5}$ in., gl. I broadly truncate entire or 3-toothed densely villous with dark brown hairs shorter than the gl., II cuneate-obovate, III present or absent, IV short linear-oblong abruptly awned, awn twice as long as the spikelet or imperfect, palea minute or 0.

MALAY PENINSULA; Pahang and Johore, *Ridley*, *Feilding.*—DISTRIB. Borneo.

Stem compressed, 6–10 in., creeping below. *Leaves* 6–20 by $\frac{1}{10}$–$\frac{1}{8}$ in., sub-distichous, rigid, flat or convolute; sheath glabrous. *Spikes* $1\frac{1}{2}$–$2\frac{1}{2}$ in., erect, rather stout, joints and pedicels = $\frac{1}{2}$ the spikelets, stiffly ciliate. *Spikelets* linear-oblong; gls. dark; I ciliate at the truncate apex, dorsally flat; II sub 3-nerved; III if present hyaline, obscurely 3-nerved, with an oblong palea larger than itself; IV half as long as II.—Habit of *P. Cumingii*, but the leaf-sheaths are all glabrous, the spikes fewer digitate much darker coloured, the hairs of gl. I are much shorter and paler.

Sect. III. LEPTATHERUM. *Stem* prostrate or decumbent. *Leaves* conspicuously contracted at the base or petioled; basal sheaths naked. Gl. I often deeply channelled dorsally; III present or absent, empty or male; when absent the palea is sometimes as long as gl. I, hyaline or rigid, faintly 2-nerved or nerveless.

* *Triandrous; anthers long narrow.*

15. **P. eucnemis,** *Nees ex Steud. Syn. Gram.* 409; leaves subpetioled, spikes few or many more or less villous with purple hairs, joints short clavate, spikelets $\frac{1}{8}$ in. oblong, gl. I dorsally sulcate truncate keels shortly

ciliate, IV shortly 2-fid, palea minute. *Hack. Monogr. Androp.* 173.—Andropogon, *Wall. Cat.* n. 8812.

BURMA; near Prome, *Wallich*; Popan district, *Collett*; PEGU, *Scott*, *Kurz*.—DISTRIB. Celebes.

Stems elongate, diffusely branched, stout or slender, smooth, polished; nodes glabrous; sheaths much shorter than the internodes. *Leaves* 2–10 in., from elliptic to lanceolate, acute, tips setaceous, nerves slender, and sheath sparsely hairy; ligule short, ciliate. *Spikes* 6–20, densely fascicled, 3–5 in. long, rather stout, pale; joints half as long as the spikelets, often pyriform, margins densely ciliate with purple hairs. *Spikelets* shining, callus shortly bearded; gl. I truncate, strongly ciliate, dorsally scaberulous; II 2-toothed, shortly awned; III 0, or very slender, ciliate, with a lanceolate acuminate glabrous 2-nerved palea as long as gl. I, triandrous or neuter; IV minute, oblong, acutely 2-toothed; awn very slender ½–⅔ in.

16. **P. Stapfii**, *Hook. f.*; branches tall from the distant smooth internodes of a long prostrate stem, leaves elliptic-lanceolate acuminate, spikes erect densely fascicled shortly stipitate thickly softly hirsute with fulvous brown hairs each with imperfect naked spikelets at the base, joints and pedicels very stout hollow, gl. I dorsally flat truncately 2-toothed hirsute all over 5–7-nerved, II dorsally convex hirsute aristulate, III 0, IV minute 2-toothed, awn very slender, palea very small, pedicelled spikelet very small awned.

ARRACAN; on low hills of sandstone at Akyab, *Kurz*.

Stem prostrate and ascending, 12–18 in. long and more, rooting at the lower swollen nodes, as thick as a crow-quill, fistular; internodes 2 in. long, quite smooth; branches 2–3 ft. high, again branched, erect, internodes much longer than the sheaths, the lower of which are open and scarious. *Leaves* 4–6 by ¼–¾ in., flat, flaccid, very thin, setaceously acuminate, sparsely hairy, midrib slender, margins smooth; ligule membranous, truncate, ciliate. *Spikes* 2–3 in., erect; joints ⅓ shorter than the spikelets and nearly as broad as the sessile one, very stout, truncate, plano-convex, hirsute all over the back and sides; pedicel of upper as large as the joint but rather shorter. *Sessile spikelet* concealed between the joint and pedicel, ⅙–⅕ in.; callus short, hirsute; gl. I oblong, flat, sub 2-toothed, 5-nerved, nerves sometimes anastomosing, margins narrowly incurved from base to tip, copiously ciliate; II cymbiform, 1-nerved, 2-toothed; IV and its nerveless oblong palea eciliate; awn = spikelet or longer, very slender, column twisted. *Pedicelled spikelets* = about ¼ the sessile, elliptic, shortly hirsute, fem. or neuter, gls. 4. *Basal spikelets* of the spikes smaller than the perfect, sessile, closely appressed to the rachis, sparsely hairy or nearly glabrous, gl. I dorsally more or less channelled.

17. **P. vagans**, *Nees ex Steud. Syn. Gram.* 410; leaves sessile, spikes 3–5, joints slender shortly ciliate, spikelets ⅛–⅙ in. linear-oblong, gl. I obovate-oblong dorsally sulcate glabrous ciliate, IV very minute 2-toothed, awn twice as long as the spikelet, palea minute toothed. *Hack. Monogr. Androp.* 173.—Andropogon, *Wall. Cat.* n. 8807 B.

NEPAL, *Wallich*.

Stem laxly branched, slender, glabrous. *Leaves* 2–4 in., very narrow, setaceously acuminate, scaberulous, glabrous. *Spikes* very slender, rachis glabrous. *Spikelets* reddish, callus shortly bearded; gl. I chartaceous, dorsally smooth; II membranous, subacute, keel above and margins ciliate; III usually 0, if present male or neuter; palea larger than its gl., oblong, obtuse, rather shorter than gl. I, membranous, 2-nerved, ciliate; IV smaller than its small subquadrate 3–4-toothed palea.

18. **P. grata**, *Hack. Monogr. Androp.* 175; nodes of stem pubescent, leaves sessile, spikes few or many densely fascicled, joints subclavate

shortly densely ciliate, spikelets ⅛–⅙ in. oblong, gl. I dorsally channelled keels rigidly ciliate towards the truncate or 2-toothed tip, II mucronate or aristulate, III 0, palea ovate-lanceolate bisexual ciliate, IV minute 2-toothed, awn long or short, palea small ovate. P. ciliata, *Nees in Pl. Meyen.* 186. ?P. montana, *Nees ex Steud. Syn. Gram.* 409. Ephebopogon, gratus, *Nees mss. ex Hack. l. c.*

SIKKIM HIMALAYA, the KHASIA and MISHMI HILLS, alt. 1–5000 ft., *Griffith*, &c.—DISTRIB. Java, China.

Stem rather stout, 3–5 ft., pubescent or scaberulous below the nodes. *Leaves* 4–8 by ⅓–⅔ in., linear, setaceously acuminate, scaberulous and sparsely hairy; sheath bearded at the nodes; ligule obscure. *Spikes* 2½–4 in., pale or dark, joints = ⅔ spikelet, rather longer than the pedicels; gl. I dorsally smooth or scaberulous.—This resembles *P. eucnemis* more than any other species, but has more numerous and darker spikes with more slender joints, and the nodes are pubescent. In some spikelets I find no gl. III or its palea, only an ovary and the ciliate palea of gl. IV.

?Var. *hirsuta*; leaves ¼ in. broad pubescent, sheath clothed with very long spreading and reflexed hairs, gl. IV all but reduced to the awn. Pegu, *Kurz.*

19. **P. ciliata,** *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1833) 306; leaves sessile, spikes very many, joints slender compressed rather shorter than the spikelets shortly ciliate, spikelets ⅛ in. narrow pale, gl. I lanceolate deeply grooved dorsally keels scabrid below ciliate towards the forked tip, II awned or mucronulate, III 0, palea empty or male, IV minute lanceolate or broader and 2-toothed, awn long or short, palea minute. *Hack. Monogr. Androp.* 176; *Steud. Syn. Gram.* 410. P. Wallichiana, *Nees ex Steud. l. c.*; *Thw. Enum. Pl. Zeyl.* 369; *Trim. Cat. Ceyl. Pl.* 107. P. lancea & laxa, *Nees ex Steud. l. c.* P. tristachya, *Thw. l. c.* 368 (*in part*). Andropogon biaristatus, *Steud. l. c.* 379. A. fasciculatus, *Linn. Sp. Pl.* 1047.—Andropogon, *Wall. Cat.* n. 8815 B, 8822, 8823.—Batratherum, ? *Wall. l. c.* n. 8831 *in part.*

TROPICAL HIMALAYA, alt. 2–5000 ft., from Kumaon to the Mishmi and Khasia Hills. BEHAR, on Parusnath, *Clarke.* NILGHIRI HILLS, *Wight.* CEYLON, *Thwaites.*

Stems 2–4 ft., much branched below, straggling, glabrous or sheaths sparsely hairy; peduncle very slender. *Leaves* very variable, usually small, 1–4 by ¼–½ in., narrowed at both ends, finely acuminate, sometimes petioled. *Spikes* flexuous. Gl. I minutely scaberulous; II sometimes with the awn longer than itself; IV variable, as is its palea, both in breadth and length. *Anthers* very long.—I am puzzled with various forms of the glumes of this plant. Hackel has four varieties: a. *genuina* (P. ciliata, *Trin.*, P. lancea, *Nees*) with linear-oblong spikelets, gl. I entire, keels pectinately ciliate, II mucronulate, IV 2-toothed long awned;—b. *laxa* (P. laxa, *Nees*) with linear-lanceolate spikelets, gl. I pectinately ciliate, II awned, IV entire long awned;—c. *Wallichiana* (Nees Sp.), spikelets linear-oblong, gl. I entire rigidly pectinately ciliate, II long-awned, IV entire, awn imperfect;—d. *seminuda*, spikelets linear-lanceolate, gl. I bimucronate, keels scabrid, II long-awned, IV entire, awn imperfect.—Ceylon (C.P. 411 in part).

20. **P. monantha,** *Nees ex Steud. Syn. Gram.* 410; very slender, spikes 4–6 slender flexuous joints shorter than the spikelets subclavate, spikelets $\frac{1}{14}$–$\frac{1}{10}$ in., 1-fld., gl. I narrow ciliate dorsally channelled, II truncate apiculate, III 0, IV minute rounded 2-toothed, awn about twice as long as the spikelet, palea very minute ovate. *Hack. Monogr. Androp.* 174. P. miscantha (*error for* monantha), *Herb. Ind. Or. Hf. & T.*—Andropogon, *Wall. Cat.* n. 8819.

SUBTROPICAL HIMALAYA; Garwhal, alt. 5000 ft., *Duthie.* SIKKIM TERAI, *J.D.H.* KHASIA HILLS, alt. 4000 ft., *J.D.H. & T.T.* BURMA, Taongdong, *Wallich*; Rangoon, *M'Lelland*; King's Isld., *Helfer.*

Stems 1–3 ft., nodes naked. *Leaves* 3–6 in., base contracted, flaccid. *Spikes* 3–6, 2–4 in. long, very slender, pale green or yellowish brown; joints compressed, broader upwards, ciliate. *Glumes* usually widely spreading; I subacute or narrowly truncate, keels scaberulous or shortly ciliate above; II with villous margins towards the mucronate or aristulate tip; IV very minute, rounded. *Anthers* linear, half as long as the gl. or more.—Resembles *P. ciliata*, but the spikelets are much smaller.

21. **P. delicatula,** *Hook. f.*; stem very slender vaguely geniculately branched leafy, leaves linear-lanceolate acuminate base very narrow, spikes 3–5 fascicled slender pale, joints linear, margins shortly ciliate, spikelets $\frac{1}{12}$–$\frac{1}{10}$ in., callus stellately bearded, gl. I thin linear-oblong truncate dorsally convex shining, keels ciliate above the middle, II apiculate keel ciliate, III 0, IV awn simple or minutely dilated at the base.

PEGU, *M'Lelland*, *Kurz.*

Stems 1–2 ft., straggling, as thick as a sparrow's quill or less, smooth. *Leaves* 2$\frac{1}{2}$–5 by $\frac{1}{4}$–$\frac{1}{2}$ in., flat, thin, sparsely ciliate chiefly towards the base, tip capillary, margins smooth, base a mere point, midrib slender; sheath very slender; ligule minute. *Spikes* 2–1$\frac{1}{2}$ in., erect, flexuous, pale green, joints truncate. *Gl.* I. of sessile spikelet 0–5-nerved, tip more or less 2-toothed; II obtuse, 3-nerved; IV awn capillary about = the spikelet. *Pedicelled spikelet* like the sessile or reduced, awned or not, male or neuter. *Stamens* 3, imperfect only seen, filaments short.

** *Triandrous, anthers minute, filaments very long.*

22. **P. imberbis,** *Nees ex Steud. Syn. Gram.* 410; stem very slender grooved, spikes solitary or few and racemose very slender, joints compressed, spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. lanceolate, gl. I narrow subtruncate keels minutely scabrid, II acute nearly glabrous, III-0, IV minute ovate-lanceolate, palea ovate, awn short. *Hack. Monogr. Androp.* 177; *Duthie Grass. N.W. Ind.* 16. P. japonica, *Franch. & Sav. Enum. Pl. Jap.* ii. 608 (*non Miq.*). P. Willdenowiana, *Benth. in Journ. Linn. Soc.* xix. (1881) 67. Andropogon vimineus, *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1883) 268. Microstegium Willdenowianum, *Nees ex Steud. l. c.* 411.—Arthraxon, *Wall. Cat.* n. 8838.—Batratherum? *Wall. Cat.* n. 8832.

TEMPERATE HIMALAYA; Simla, *Gamble*; Nepal, *Wallich*; Sikkim, alt. 4–7000 ft., *J.D.H.*, *Clarke.* KHASIA HILLS, alt. 4–5000 ft.—DISTRIB. China, Japan.

Leaves narrowed to the base, flaccid, smooth or subscaberulous. *Spikes* 1–3 in., not fascicled, green, joints more or less ciliate, hardly clavate; callus naked; gl. I concave dorsally, 2–6-nerved, nerves sometimes anastomosing; II 1–3-nerved; awn of IV sometimes capillary, and very short (var. *Willdenowiana*, Hack.); sometimes (var. *genuina*, Hack.) it is longer, stouter, with a twisted base.—Very variable in size; small Nepal specimens have filiform stems 6–12 in., with oblong-lanceolate acute leaves an inch long, and solitary spikes; some large Khasian specimens have stouter much branched stems 2-3 ft. long, with acuminate linear-lanceolate leaves 3–6 in. long, and 6–7 spikes.—The minute persistent didymous anthers are those of *Arthraxon*, and differ from those of all other Indian species of *Pollinia.*

*** *Diandrous, anthers linear-oblong.*

23. **P. nuda,** *Trin. in Mem. Acad. Petersb. Ser.* ii. (1833) 307; very slender, spikes few racemed very slender, joints slender terete, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. narrowly lanceolate, gl. I bicuspidate very narrow keels scaberulous, II acuminate, III as long as II hyaline ciliate or 0, IV lanceolate, palea

minute truncate, awn short. *Hack. Monogr. Androp.* 178; *Steud. Syn. Gram.* 410. P. japonica, *Miq. Ann. Mus. Lugd. Bat.* ii. 290. Leptatherum Royleanum, *Nees in Proc. Linn. Soc.* i. (1841) 93; *Franch. & Sav. Enum. Pl. Jap.* ii. 609.—Batratherum? *Wall. Cat.* n. 8831 *in part.*

TEMPERATE HIMALAYA; from Chamba to Upper Assam, alt. 4–7000 ft. (to 10,000 in Kumaon), KHASIA HILLS, alt. 4–5000 ft., *Griffith,* &c.—DISTRIB. China, Japan, S. Africa.

Stem 2–3 ft., grooved. *Leaves* 1–4 in., lanceolate, very variable in breadth, acuminate, flaccid; sheath hairy; ligule glabrous. *Spikes* 3–5, rarely more, 1–4 in. long, flexuous, green; joints longer or shorter than the spikelets, glabrous or ciliolate. *Spikelets* sometimes distant, callus nearly naked or villous; gl. I rarely truncate or obtuse, often strongly forked, dorsally concave, glabrous or most minutely scaberulous, margins rarely ciliate; II nearly glabrous; III if present narrow, glabrous or sparsely ciliate, nerveless; IV variable in size, never = ½ III, 3-nerved.

EXCLUDED SPECIES.

P. JAPONICA, *Benth. ex Duthie Grass. N.W. Ind.* 16.—Duthie gives this grass which is no doubt *Eurianthus fulvus,* as a native of the Panjab and N.W. Himalaya up to 9000 ft. I find no authority for the name. *P. japonica,* Franch. & Sav. is *P. imberbis,* Nees, and *P. japonica,* Miq. is *P. nuda*; both are Japanese and Himalayan plants. There is also *Eulalia japonica,* Trin. (*Mischanthus sinensis,* Anderss.), which is not Himalayan.

35. **SACCHARUM,** *Linn.*

Tall perennial grasses. *Infl.* a large silky much and densely branched panicle, with spreading at length erect articulate capillary branches and branchlets (spikes). *Spikelets* minute, awnless, 1-fld., binate, a sessile bisexual and pedicelled, fem., rarely both pedicelled and bisexual. *Glumes* 4, all membranous, or I strongly chartaceous, or I and II rarely coriaceous; III empty; IV shortest, rarely 0; palea hyaline nerveless or 0. *Lodicules* cuneate. *Stamens* 3. *Stigmas* laterally exserted. *Grain* oblong.—Species about 12, tropical, chiefly Asiatic.

Sect. I. EUSACCHARUM. *Rachis* of spike fragile. *Spikelets* of each pair subequal, sessile and pedicelled, both fertile. *Stem* solid.

S. OFFICINARUM, *Linn. Sp. Pl.* 54; stem solid glabrous below the panicle, upper leaves long margins scabrid, joints of spikes and pedicels glabrous, hairs of callus about twice as long as the spikelet, gl. I glabrous subchartaceous, IV very narrow or 0, palea small lanceolate. *Roxb. Fl. Ind.* i. 237; *McFad. in Hook. Bot. Misc.* i. (1830) 95, t. 26; *Steud. Syn. Gram.* 405; *Hack. Monogr. Androp.* iii. 111; *Miq. Fl. Ind. Bat.* iii. 507. *Morris in Journ. Linn. Soc.* xxviii. (1890) 197, t. 23. S. sinense, *Roxb. l. c.*

Cultivated in the hotter parts of INDIA.—Native country unknown. For history and cultivation of the sugar-cane in India see Watts' "Dictionary of the Economic Products of India," and for its origin A. de Candolle "L'Origine des Plantes Cultivées."

1. **S. spontaneum,** *Linn. Mant.* ii. 183; stem silky below the panicle, upper leaves long margins smooth, hairs of callus many times longer than the spikelet, gl. I thickened below, IV usually 0, palea ciliate. *Roxb. Fl. Ind.* i. 235; *Kunth Enum. Pl.* i. 475, *Suppl.* 384; *Wight Cat.* n. 1682; *Griff. Notul.* iii. 73, *Ic. Pl. Asiat.* t. 139, f. 63; *Dalz. & Gibs. Bomb. Fl.* 304; *Thw. Enum. Pl. Zeyl.* 369; *Trim. Cat. Ceyl. Pl.* 106.

Aitchis. Cat. Panjab. Pl. 172; *Duthie Grass. N.W. Ind.* 15, *Indig. Fodd. Grass.* 57, *Fodd. Grass. N. Ind.* 25; *Steud. Syn. Gram.* 405; *Hack. Monogr. Androp.* 113; *Anderss. in Œvers. Vet. Akad. Handl. Stockh.* (1885) 156; *Miq. Fl. Ind. Bat.* iii. 512. S. ægyptiacum, *Willd. Enum. Hort. Berol.* i. 82; *Boiss. Fl. Orient.* v. 454. S. bengalense, Boga, Casi, Lola & tenuius, *Herb. Ham. ex Wall. Cat.* n. 8854. S. biflorum, *Forsk. Fl. Æg. Arab.* i. 16. S. caducum, Palisotii & speciosissimum, *Tausch in Flora* (1836) 527; *Steud. l.c.* 406, 405, 407. S. canaliculatum, *Roxb. l.c.* 246; *Wight Cat.* n. 1682; *Duthie Grass. N.W. Ind.* 14; *Steud. l.c.* 406. S. chinense, *Nees in Hook. & Arn. Bot. Beech. Voy.* 241. S. Glaza, *Reinw. ex Blume Gew. Buitenz.* 38. S. insulare, *Brongn. Voy. Coq. Bot.* 99; *Steud. l.c.* 406. S. Klaga, *Jungh. ex Tijdschr. Nat. Gesch.* vii. 296; *Steud. l. c.* (Klagha). S. punctatum, *Schum. Besch. Pl. Guin.* 46. S. propinquum, *Steud. l. c.* S. spontaneum, var. Klaga, *Trin. Fund. Agrost.* t. 15, p. 1–6. S. semidecumbens, *Roxb. l. c.* 236; *Duthie l. c. Steud. l. c.* 406; *Wall. Cat.* n. 8854 A. Imperata spontanea, *Beauv. Agrost.* 8; *Roem. & Sch. Syst.* ii. 289; *Miq. Fl. Ind. Bat.* iii. 512.—Saccharum, *Wall. Cat.* n. 8854.

Throughout the warmer parts of INDIA and CEYLON, ascending to 6000 ft. in the Himalaya.—DISTRIB. S. Europe and warm regions of the Old World. East Australia.

Stem 5–20 ft., erect from a stout rootstock. *Leaves* erect, very long, narrow, margins convolute or incurved; mouth of sheath woolly; ligule membranous. *Panicle* 1–2 ft.; branches whorled, spreading; branchlets fragile; joints filiform, dorsally long-ciliate. *Spikelets* ⅛–⅙ in., lanceolate; gl. I 2-nerved; II lanceolate, subkeeled; III ovate-lanceolate, subacute, ciliate; IV very variable.—Hackel recognized two subspecies and several varieties of them.

Subsp. *indicum*; slender, leaves narrow, ligule ovate subacute, spikes slender lax-fld., spikelets ⅛–⅙ in. 4–6 times shorter than the snow-white villi.—All parts of India.

Subsp. *ægyptiacum*; slender, leaves broadly linear, ligule truncate, spikes stouter more dense-fld., spikelets longer ⅙–¼ in., villi shorter.—Almost confined to Africa, except var. *nepalense*, with spikelets only ⅙ in.—N.W. India, *Royle* (n. 197).

2. **S. arundinaceum,** *Retz. Obs.* iv. 14; stem glabrous below the panicle, upper leaves long margins hispidly ciliate, joints and pedicels glabrous or ciliate, hairs of callus silky much shorter than the spikelet, gl. I chartaceous acuminate dorsally villous, IV broadly lanceolate. *Kunth Enum. Pl.* i. 475; *Hack. Monogr. Androp.* 117; *Steud. Syn. Gram.* 407. ? S. benghalense, *Retz. l. c.* 16. S. ciliare, *Anderss. in Œvers. Vet. Akad. Handl. Stockh.* (1855) 155; *Hack. l. c.* 118 (*excl. vars. β. γ.*). S. exaltatum, *Roxb. Fl. Ind.* i. 245; *Wight Cat.* n. 1681; *Grah. Cat. Pl. Bomb.* 239; *Steud. l. c.* S. Moonja, *Royle Ill. Himal. Pl.* 416. S. Munja, *Roxb. l. c.* 246. S. procerum, *Roxb. l. c.* 243; *Steud. l. c.*; *Trim. Cat. Ceyl. Pl.* 106; *Duthie Grass. N.W. Ind.* 15. S. Sara, *Roxb. l.c.* 244; *Kunth l.c.*; *Steud. l. c.* 406; *Aitchis. Cat. Panjab. Pl.* 172; *Duthie Grass. N.W. Ind.* 15, *Indig. Fodd. Grass.* t. 50, *Fodd. Grass. N. Ind.* 15; *Boiss. Fl. Orient.* v. 453; *Hack. l. c.* 118; *Wall. Cat.* n. 8853, A. D. S. Surpata, *Hb. Ham. ex Wall. Cat.* 8853 D.—Saccharum, *Wall. Cat.* n. 8852, 8853.—*Rheede Hort. Mal.* xii. t. 46.

Throughout the Plains and low Hills of INDIA. CEYLON, at Colombo, *Trimen.* —DISTRIB. China.

Perennial. *Stem* 10–20 ft. erect from a stout rootstock, branching after the second year. *Leaves* 3–5 ft. by 2–3 in., broadest about the middle, tapering to a slender point, midrib white; sheath bearded about the mouth; ligule short, hairy, *Panicle* 1–2 ft., erect, ovoid or oblong; branches half-whorled, clothed with soft cream-colrd. rarely purplish hairs. *Spikes* 1–3 in., rachis capillary. *Spikelets* $\frac{1}{10}$ in., lanceolate, pale green violet or brownish; gl. I dorsally flat or depressed. nerveless except the keels; II lanceolate, shortly acuminate; III oblong-lanceolate; IV mucronate.—Hackel includes under *S. ciliare*, *S. Griffithii*, Munro, which is regarded by Dr. Stapf and myself as an *Erianthus*, gl. IV being clearly awned. *S. benghalense* is a doubtful plant, wanting, according to Hackel, in Retz's Herbarium.

3. **S. Narenga,** *Ham. in Wall. Cat.* n. 8856; stem slender silky below the panicle, nodes bearded, leaves scabrid above uppermost subulate, branchlets of panicle clothed with purple hairs, pedicels clavellate hispidulous, hairs of callus rigid, gl. I coriaceous glabrous or hairy below, II oblong coriaceous tip membranous. *Hack. Monogr. Androp.* 119; *Duthie Grass. N.W. Ind.* 14. Eriochrysis Narenga, *Nees ex Steud. Syn. Gram.* 411; *Aitchis. Cat. Panjab Pl.* 172.—Saccharum, *Wall. Cat. l. c.*

TROPICAL HIMALAYA, from Garwhal, alt. 3–4000 ft., to the KHASIA HILLS, UPPER and LOWER BENGAL, ASSAM, SILHET, CENTRAL INDIA, and BURMA.—DISTRIB. Tonkin, China.

Stem 6–8 ft.; internodes often longer than the sheaths, nodes stellately bearded. *Leaves* 1–2 ft. by $\frac{1}{4}$ in., linear, base narrow, flat; sheath with tubercle-based hairs; ligule rounded. *Panicle* 12–18 in., narrow; rachis scaberulous, bearded at the nodes; branches 2–4-nate, appressed to the fragile rachis, branchlets fascicled. *Spikelets* $\frac{1}{10}$ in., callus minute, hairs longer or shorter than the spikelet; gl. I ciliolate; IV linear-oblong, ciliate.—Hackel has two varieties: *α. genuinum*, Himalayan, with gl. I and II of the sessile spikelet obtuse, glabrous; *β. khasianum*, with the corresponding gl. subacute, densely hairy below.

Sect. II. SCLEROSTACHYA (*Anderss.*). *Rachis* of spike tenacious. Both spikelets of each pair pedicelled. *Stem* fistular.

4. **S. fuscum,** *Roxb. Fl. Ind.* i. 236; stem stout silky or villous below the panicle, rachis of panicle villous, spikes nodding, hairs of callus about $\frac{1}{2}$ the length of the oblong or obovoid spikelets, gl. I obtuse, keels ciliate, III and IV ciliate. *Hack. Monogr. Androp.* 121; *Kunth Enum. Pl.* i. 474, *Suppl.* 385; *Steud. Syn. Gram.* 406; *Duthie Grass. N.W. Ind.* 14. S. Modhara, *Ham. in Wall. Cat.* n. 8855 C. Tricholæna? fusca, *Schult. Mant.* ii. 164. Eriochrysis fusca, *Trin. in Mem. Acad. Petersb. Ser.* vi. (1833) II. 315; *Steud. l. c.* 411. E. fusca & attenuata, *Nees ex Steud. l. c.* Miscanthus fuscus, *Benth. in Journ. Linn. Soc.* xix. (1881) 65.—Saccharum, *Wall. Cat.* 8855.

UPPER and LOWER GANGETIC PLAINS, ASSAM, the KHASIA HILLS, the WESTERN GHATS, and BURMA.

Stem 5–8 ft. or more, as thick as the little finger. *Leaves* 3–4 ft. by 1–2 in., linear-lanceolate, rigid, glabrous, margins scabrid; margins of sheath fimbriate; ligule rounded. *Panicle* 1–2 ft., narrow, branches whorled or fascicled or subsolitary, nodes bearded; spikes or branchlets nodding, slender, flexuous; joints trigonous, glabrous. *Spikelets* $\frac{1}{8}$ in., brown, upper and lower alike; gl. I entire, margins narrowly inflexed, dorsally flat smooth shining; II subacute, keeled, 1-nerved; III ovate-oblong, obtuse, nerveless, ciliate above; IV like III but shorter, ciliate with rigid hairs; palea much shorter ovate, ciliate. *Grain* obovoid, smooth, brown.

5. **S. Ridleyi,** *Hack. in Œstr. Bot. Zeitschr.* xli. (1891) 6; stem glabrous below the long narrow panicle, rachis of panicle glabrous, spikes erect very long filiform lax-fld., hairs of callus $\frac{1}{3}$ the length of the oblong-

lanceolate spikelets, gl. I 2-toothed keels minutely spinulous, III and IV pectinately ciliate with very long hairs.

MALAY PENINSULA; Pahang, *Ridley.*

Stem several feet high. *Leaves* 2–3 ft. by ⅓–⅙ in., linear, rigid, green, glabrous, margins scabrid; sheath terete, glabrous; ligule very short, truncate. *Panicle* 2 ft. long, erect; rachis angular, subgeniculate at the distant bearded nodes; branches fascicled, very long, filiform; spike 3-5 in., firm, flexuous, lax-fld., glabrous except the bearded axils; joints and pedicels slender, glabrous, terete. *Spikelets* both pedicelled equal and perfect, ⅙ in. long, yellowish-brown; pedicel of lower = ⅓ the length of the upper which is about ⅓ shorter than the joint; gl. I chartaceous, dorsally flat, sides incurved and base sparsely hairy, 2–3-nerved besides the keels; II chartaceous, acute, 3-nerved, sparsely hairy; III nearly equal II, nerveless, margins incurved the long hairs crossing; IV rather shorter, broadly ovate, nerveless, its long hairs up-curved; palea variable, small or minute, ciliate.

DOUBTFUL SPECIES.

S. BRUNNEUM, *Desv. Opusc.* 65, is a species of *Tricholaena*, according to Hackel (Monogr. in Index, p. 707), but as that genus is suppressed and the only Indian plant referred to it is *S. fuscum* (q. v.), it follows that *S. brunneum* may be that plant, and if so Desvaux's name has priority.

36. **ERIANTHUS,** *Michx.*

Habit and characters of *Saccharum*, but gl. IV awned, rarely awnless. —Species about 16, temperate and tropical.

I find no characters whereby to distinguish *Erianthus* from *Saccharum* except that given above, which is all but illusory, and a re-examination of both genera may lead to a better disposition of their species under two or more genera or sections. *Pollinia* differs chiefly in the digitate spikes (see *E. fastigiatus*).

A. Lower branches of the panicle much shorter than the rachis.

* Panicle decompound; ultimate branchlets (spikes) very short, of 3–4 joints; awn of gl. IV short or obsolete.

1. **E. Ravennæ,** *Beauv. Agrost.* 14; leaves flat, ligule very short, panicle oblong, hairs of callus as long as the gls., spikelets ⅕–¼ in. linear-lanceolate, gl. I membranous lanceolate acuminate tip 2-mucronate keels subspinulosely scabrid, IV rather shorter than I ovate-lanceolate narrowed into a slender awn of its own length or shorter. *Kunth Enum. Pl.* i. 479, *Suppl.* 389; *Hack. Monogr. Androp.* 139; *T. Nees Gen. Fl. Germ. Monocot.* n. 90; *Reichb. Ic. Fl. Germ.* t. 55; *Ledeb. Fl. Ross.* iv. 475; *Boiss. Fl. Orient.* vi. 455; *Duthie Grass. N.W. Ind.* 15, *Fodd. Grass. N. Ind.* 26. E. jamaicensis, *Anderss. in Œvers. Vet. Akad. Handl. Stock.* (1855) 163. Saccharum Ravennæ, *Murray Syst. Ed.* xiii. 88; *Sibth. & Sm. Fl. Graec.* i. 38, t. 52; *Steud. Syn. Gram.* 48. S. jamaicense, *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1833) 312. Andropogon Ravennæ, *Linn. Sp. Pl. Ed.* II. 1481; *Host. Gram. Austr.* iii. 1, t. 1. Ripidium Ravennæ, *Trin. Fund. Agrost.* 169.

WESTERN HIMALAYA and WESTERN TIBET, alt. 6–9000 ft., from Kashmir to Kumaon, the PANJAB and UPPER GANGETIC PLAIN, from the Indus to Delhi.— DISTRIB. Westward to the Mediterranean.

Stem 6–10 ft., nodes glabrous. *Leaves* 2–3 ft. by 1–1½ in., linear, scaberulous on both surfaces, bearded at the base with golden hairs, margins scabrid; midrib broad;

sheath hairy; ligule silkily villous. *Panicle* 1–3 ft., erect or inclined, greyish-white with silkily villous hairs; spikes (terminal branchlets) about ½ in., joints and pedicels filiform, half as long as the spikelets or more, ciliate with long hairs. *Spikelets* pale; gl. I with one or both margins incurved, nerves 1–3 between the keels; II rather longer, acuminate or aristulate, 3-nerved, keel scabrid; III lanceolate, ciliate, 1-nerved, hyaline; IV glabrous or ciliolate, 3-nerved, rarely awnless; palea shorter, ovate-lanceolate, glabrous. *Pedicelled spikelet*, gl. I strongly 2–3-nerved, villous below as is gl. II.—A very variable grass in stature, colour of the hairs of the panicle, size of the spikelets, and length of the awn.

Var. *purpurascens*, Hack. l. c.; spikelets more or less tipped with violet or purple. E. purpurascens, *Anderss. l. c.* 161.—Common in N.W. India.

2. **E. Griffithii,** *Hook. f.*; leaves very narrow rigid semiterete concave above, ligule long, panicle oblong very pale, callus densely villous with spreading hairs as long as the lanceolate acuminate or acute spikelet, gl. I and II dorsally villous, keels spinulose, IV ovate-lanceolate ciliate narrowed into the short awn. Saccharum Griffithii, *Munro ex Aitchis. in Journ. Linn. Soc.* xix. (1882) 191 (*name only*). S. ciliare, *var. β.* Griffithii, *Hack. Monogr. Androp.* 119. S. Sara, *Aitchis. l. c. ex Hack. l. c.*

PESHAWUR, *Stewart.* WESTERN TIBET; below Rondu, *Thomson.*—DISTRIB. Affghanistan, Beluchistan.

Stem tall, tufted, glabrous, solid, as thick as a swan's quill, quite glabrous, pale, polished. *Leaves* 2–3 ft. by ⅛–⅙ in., thickly coriaceous, rigid, quite smooth, dorsally rounded, upper surface concave, margins scaberulous; sheath smooth, polished, shining; ligule long, ciliate with long hairs. *Panicle* 6–12 in., contracted, thyrsiform, inclined, pale yellow when dry; rachis glabrous; lower branches 1–2 in., joints about ½ as long as the spikelets and pedicels villous with long pale hairs. *Spikelets* pale, often tipped with purple; callus hairs about as long as the spikelets, or shorter, white or pale brownish; gls. I and II subequal; I 3-nerved, margins narrowly incurved, scabrid; II rather longer, acuminate; III lanceolate, 1-nerved, hyaline, margins long-ciliate; IV as long as III, 3-nerved, narrowed into a short included or shortly exserted awn; palea much shorter than the gl., more or less ciliate.—Referred to *Saccharum ciliare* (*arundinaceum*) by Hackel, from which the awned gl. IV at once distinguishes it, and much more closely allied to *Erianthus Ravennæ*, differing in the pale straw-colour of its stem, leaves and panicle, rigid ½-terete leaves concave on the upper surface, long ligule, and dorsally hairy gl. I and II. *Griffith, Itinerary Notes,* 317 (n. 1193) describes this as a large grass, 6–7 ft. high, with white spikes, very common at 5000 ft. at Jugdulluk (Affghanistan).

3. **E. elephantinus,** *Hook. f.*; gigantic, leaves broad flat, panicle very large supradecompound, spikelets $\frac{1}{12}$–$\frac{1}{10}$ in., hairs of callus as long as the gls. or longer, grey or purplish, gl I narrowly ovate-lanceolate dorsally sparsely hairy keels scabrid, II lanceolate acuminate subaristate 1-nerved, IV shorter than I ovate-lanceolate 3-nerved eciliate narrowed into a shortly exserted awn.

ASSAM, *Griffith, Simonds.*

Stem very tall and stout, as thick as the middle finger below the panicle, quite smooth, glabrous. *Leaf* (upper) two or more feet long by ¾ in. broad, quite smooth on both surfaces, margins serrulately scabrid; sheath several feet long; ligule of long straight hairs. *Panicle* 14 in. long, oblong, inclined; rachis as thick as the little finger below, glabrous, polished; lower nodes 4 in. apart, branches numerous, lower fascicled and half-whorled 6–8 in. long. *Spikes* few-fld., capillary, fragile; joints and pedicels half as long as the spikelets or longer, villously ciliate, tops cupular. *Spikelets* ovate-lanceolate, pale; gl. I and II subequal, membranous; I lanceolate, acuminate, tip minutely 2-toothed, dorsally flat, with one median nerve, margins narrowly incurved; II ciliate; III as long as I, hyaline but stiff, 1-nerved, ciliate, margins incurved; IV shorter than III, quite glabrous; palea nearly as long as the gl., lanceolate from a crowded concave base.—Evidently a gigantic species of which I have seen only one specimen of leaves and panicle from the Calcutta Herbarium, and a scrap of a panicle from Griffith.

** Branches of panicle long simple much or sparingly divided; spikes many-jointed; awn of gl. IV more than twice as long as the spikelet, rarely (in *sikkimensis* and *chysothrix*) shorter or 0.

† Gl. IV entire, narrowed into the awn.

4. **E. fulvus,** *Nees ex Steud. Syn. Gram.* 409; stem silkily villous below the long narrow silkily villous panicle, spikelets $\frac{1}{10}$–$\frac{1}{12}$ in. narrowly oblong much shorter than the fulvous purplish or reddish hairs of the callus, gls. I and II hyaline above the middle, IV very narrow. *Hack. Monogr. Androp.* 147. E. rufipilus, *Griseb. in Goett. Nachr.* (1868) 93; *Duthie Grass. N.W. Ind.* 15. E. japonicus, *Herb. Strach. & Winterb.* n. 2, *& Herb. H.f. & T.* Saccharum rufipilum, *Steud. l. c.*—Erianthus, *Wall. Cat.* n. 8849.

TEMPERATE HIMALAYA; from Kashmir to Sikkim, alt. 5–7000 ft. KHASIA and NAGA HILLS, alt. 5–5500 ft.

Stem 6–8 ft., stout; nodes glabrous or pubescent. *Leaves* 2–3 ft. by $\frac{1}{4}$–1 in., flat, glaucous and scaberulous beneath and on the margins; margins of sheath hairy; ligule rounded, ciliate. *Panicle* 8–18 in., erect, decompound; rachis villous; spikes crowded; joints 8–10 and pedicels filiform, villous, half as long as the spikelets or more. *Spikelets* concealed by the hairs of the callus and joints, usually brownish; gl. I chartaceous below, tip suddenly acute, quite entire, 1–3-nerved, dorsally flat, glabrous; margins not incurved or below the tip only, ciliolate above; II rather longer, acute or 2-mucronate, glabrous, margins ciliate; III lanceolate, ciliate, acuminate or shortly awned; IV much shorter, ovate-lanceolate, glabrous, 1-nerved; awn $\frac{1}{4}$–$\frac{1}{3}$ in., palea as long as the gl. or shorter or 0? *Pedicelled spikelets* hardly different from the sessile.—The name *fulvus* is not appropriate.

5. **E. sikkimensis,** *Hook. f.*; stem very slender silkily villous below the very narrow stiff panicle, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. lanceolate longer than the white hairs of the callus, gl. I tip broadly 2-fid sides villous with long hairs hyaline above the middle, IV very narrow.

SIKKIM HIMALAYA; Lachen Valley, alt. 6000 ft., *J. D. H.*

Stem 1–2 ft., as thick as a dove's quill. *Leaves* narrow, rigid, flat, hairy towards the base, margins scabrous; sheaths glabrous or sparsely pubescent above; ligule rounded ciliate. *Panicle* 4–6 in., sparingly branched; spikes strict, erect, appressed to the villous rachis, joints and pedicels nearly as long as the spikelet, glabrous. *Spikelets* erect; gl. I oblong-lanceolate, coriaceous below the middle, dorsally glabrous, sides with long silky hairs, tip bifid with a broad sinus, margins inflexed, keels scabrid, nerves 5 between the scabrid keels vanishing upwards, tips often anastomosing; II chartaceous below the upper hyaline third, keeled, 3-nerved, margins ciliate; III as long as II, thinly chartaceous, 3-nerved, margins incurved ciliate; IV nearly = III, linear-lanceolate, 1-nerved, subciliate, narrowed into a short straight awn; palea nearly = the gl. subulate-lanceolate ciliolate.—Specimens very imperfect.

†† Gl. IV 2-toothed or 2-lobed.

§ *Gl. I. dorsally glabrous or nearly so.*

6. **E. filifolius,** *Nees ex Steud. Syn. Gram.* i. 409; stem pubescent below the narrow panicle, leaves filiform, spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. lanceolate rather longer than the hairs of the callus, gl. I of sessile spikelet membranous acute keels scabrid, IV entire or minutely 2-toothed, awn much longer than the spikelet, gl. I of pedicelled spikelet 6–7-nerved. *Hack. Monogr. Androp.*

146. Saccharum filifolium, *Steud. Syn. Gram.* 409; *Duthie Grass. N.W. Ind.* 14.

TEMPERATE WESTERN HIMALAYA, from Chamba to Kumaon, alt. 5-8000 ft., *Royle*, &c.

Stem 2–3 ft., rootstock woody, nodes pubescent. *Leaves* 8–12 in., rigid, glabrous, convolute below, narrowed to the hair, tip capillary; sheath glabrous; ligule very short, obtuse, ciliolate. *Panicle* 6–8 in., red-purple; joints and pedicels = about half the spikelet, ciliate. *Spikelets* surrounded with dense white hairs; gl. I minutely 2-toothed, margins broadly inflexed, dorsally glabrous with 3–4 unequal intracarinal nerves; II like I, 3-nerved, keel smooth; III lanceolate, 2-mucronulate, sub 2-nerved, margins inflexed ciliate; IV shorter, linear-lanceolate, 1-nerved, glabrous; palea short, lanceolate, glabrous.

7. **E. versicolor,** *Nees ex Steud. Syn. Gram.* 409; stem glabrous below the lanceolate panicle, leaves flat, spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. linear-lanceolate concealed by the dense white hairs of the callus, gl. I of sessile spikelet variegated chartaceous below reddish and membranous above, keels smooth, IV cuspidately 2-toothed ciliolate, awn twice as long as the spikelet or more, gl. I of pedicelled spikelet 3-nerved between the keels. *Hack. Monogr. Androp.* 144; *Duthie Grass. N.W. Ind.* 16.

TEMPERATE HIMALAYA; from Kashmir to Sikkim, alt. 2500–7000 ft.

Stem tall, pubescent below the nodes. *Leaves* 8–16 by $\frac{1}{8}$–$\frac{1}{6}$ in., smooth, margins scabrid; sheath glabrous or mouth sparingly hairy; ligule broadly ovate, glabrous. *Panicle* 8-10 in., rachis and branches opposite, glabrous, axils bearded; joints of spike 5–7 and pedicels $\frac{2}{3}$ as long as the spikelet or longer, shortly ciliate with stiff white hairs. *Spikelets* usually green and violet below the middle, reddish above it; gl. I tip subacute obtuse or 2-denticulate, nerves 2-3 between the keels vanishing upward; II linear-oblong, entire, 1-nerved, keel scaberulous; III linear-oblong nerveless, tip ciliolate; IV = $\frac{1}{4}$ II, cuspidately 2-toothed; palea $\frac{1}{3}$ shorter, linear-lanceolate acute, glabrous.—I very much doubt this being distinct from *E. filifolius* and the following; and amongst the numerous specimens of Himalayan *Erianthi* which I have examined, and which must include these, I find it impossible to refer many with precision to any of these three.

Var. *pallens*, stem slightly pubescent below the pale lanceolate panicle, leaves flat, spikelets $\frac{1}{5}$ in. oblong $\frac{1}{4}$ shorter than the dense white hairs of the callus, gl. I membranous tip hyaline keels smooth, IV cuspidately 2-toothed ciliolate, awn 3–4 times as long as the spikelet, gl. I of pedicelled spikelet shortly 1-nerved between the keels. E. pallens, *Hack. Monogr. Androp.* 145.

8. **E. longisetosus,** *Anderss. ex Benth. in Journ. Linn. Soc.* xix. (1881) 67; stem naked below the ovate-oblong panicle, sessile spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. lanceolate equalling or rather shorter than the red-brown hairs of the callus, gl. I oblong-lanceolate chartaceous bicuspidate 2-nerved between the smooth keels sides sparsely ciliate, IV narrow 2-fid, awn 4 or 5 times as long as the spikelet, gl. I of pedicelled spikelet 6–7-nerved. *Hack. Monogr. Androp.* 143; *Clarke in Journ. Linn. Soc.* xxv. (1889) 85, t. 34. E. mishmeensis, Munro mss.—Erianthus, *Wall. Cat.* n. 8846.

TROPICAL HIMALAYA, alt. 1–3000 ft., from Nepal to the Mishmi, Naga and Munnepore Hills, ASSAM, SILHET and CHITTAGONG.

Stem 6–8 ft., stout, nodes pubescent. *Leaves* 1–3 ft. by $\frac{1}{3}$–$1\frac{3}{4}$ in., glabrous except at the base within, many-nerved, quite smooth, base often much narrowed; sheath smooth; ligule rounded. *Panicle* 6–18 in., of many long densely packed solitary or binate long divided soft drooping spikes clothed with pale reddish or golden-brown hairs, rachis glabrous, joints and pedicels slender about as long as the spikelets densely ciliate with long hairs. *Spikelets* brown below, pale above; gl. I with rather broadly inflexed margins; II oblong-lanceolate, chartaceous, apiculate or aristulate from a notched tip, 3-nerved, keel smooth, margins villous; III oblong, hyaline, copiously ciliate; IV variable in length, 1-nerved; palea usually half as long as the gl., very narrow.—In *Journ. Linn. Soc. l. c.* the authority for the name *longisetosus* is by oversight given as Thos. Anderson (late Director of the Calcutta Bot. Gardens.)

§§ *Gl. I dorsally villous at the base or all over.*

9. **E. Hookeri,** *Hack. Monogr. Androp.* 142; stem pubescent below the linear-lanceolate panicle, sessile spikelets ⅙–¼ in. oblong-lanceolate rather longer than the reddish hairs of the callus, gl. I chartaceous acute tip membranous dorsally flat densely villous below the middle, 1-nerved between the scabrid keels, IV obtusely 2-toothed, awn twice or thrice as long as the spikelet, gl. I of pedicelled spikelet 5-nerved villous all over.

SIKKIM HIMALAYA, alt. 1–3000 ft., *J.D.H.*, *Clarke.* BHOTAN, *Herb.* Calcutta. —DISTRIB. Yunan.

Stem 2–3 ft., often branched below. *Leaves* 2–4 ft. by ½–1¼ in.; sheath puberulous, villous at the top; ligule rounded, ciliate. *Panicle* 10–18 in., rachis pubescent, branches short, 2–3-nate; spikes unequal, joints and pedicels = ½ the spikelet, ciliate with long hairs. *Spikelets* rusty red; gl. I villous with white hairs, margins inflexed above the middle, nerves often anastomosing; II oblong, chartaceous, 3-nerved, keel scabrid above; III shorter, lanceolate, nerveless, ciliate, tip dilated; IV awn brown subdorsally inserted; palea minute, long-ciliate.—Very near *E. longisetosus*, and *versicolor*; hardly distinguishable except by gl. I being dorsally villous below the middle.

10. **E. chrysothrix,** *Hack.* in *Œstr. Bot. Zeitschr.* xli. (1891) 6; stem rusty tomentose below the large panicle, spikes long hairy joints villous with rusty hairs, sessile spikelets ⅐ in. linear-oblong, gl. I chartaceous narrowly truncate, dorsally villous all over, IV oblong 2-fid, awn very short or 0. Saccharum longifolium, *Munro ex Benth. in Journ. Linn. Soc.* xix. (1861) 66. S. fallax β, *Balansa in Journ. de Bot.* (*Paris,* 1890) 81. Eriochrysis longifolia, *Munro mss.*

KHASIA and NAGA HILLS, alt. 2–4000 ft., *Griffith,* &c.—DISTRIB. Tonkin, Borneo.

Stem 8–10 ft., as thick as the middle finger, solid, smooth. *Leaves* 2–3 ft., glabrous or hirsute; sheaths with tubercle-based hairs; ligule short. *Panicle* 1–2 ft., erect, contracted, dense-fld., sometimes rustily villous; rachis angular, hairy, fragile; spikes whorled, 2–3 in.; joints and pedicels half as long as the spikelet, villous. *Spikelets* brown; gl. I 2-nerved, dorsally flat, keels ciliate; II keeled, truncate, 3-nerved; III shorter, oblong-lanceolate, ciliate; IV = ½ III, ovate or linear-oblong, acutely 2-fid, ciliate; awn in the cleft, ⅙–¼ in.; palea minute, broad, truncate, ciliate with long hairs.—Very unlike any other Indian species.

B. Lower branches of the panicle almost as long as the rachis.

11. **E. fastigiatus,** *Nees ex Steud. Syn. Gram.* 409; stem silky below the panicle, spikes crowded subdigitately fascicled, spikelets ⅙–⅕ in. lanceolate much longer than the white hairs of the callus, gl. I chartaceous purplish-brown base dorsally and margins sparsely villous, keels above aculeolate, IV oblong or lanceolate 2-denticulate, awn terminal as long as the spikelet or longer. *Hack. Monogr. Androp.* 150. Saccharum fastigiatum, *Steud. l. c.*—Saccharum, *Wall. Cat.* n. 8847.

Tropical SIKKIM, the KHASIA and MISHMI HILLS, ASSAM, SILHET, CHITTAGONG, CHOTA NAGPORE, *Clarke,* BELGAUM, *Ritchie.*

Stem 2–8 ft., stout or slender. *Leaves* 1–2 by ⅙–¼ in., linear from a narrow base, rigid, flat, smooth, margins scabrid; sheath glabrous, mouth fimbriate; ligule very short, truncate. *Panicle* oblong or fan-shaped; rachis hairy; spikes crowded, lower 3–5 in. strict slender, joints many and pedicels = ½ spikelet or shorter, villous with long white hairs. *Spikelets* dark colrd. below paler above; gl. I dorsally subchannelled, scaberulous, ciliate upwards, 1-nerved between the keels; II chartaceous, lanceolate, margins hyaline, III = I, linear-lanceolate, base membranous coloured, hyaline above; IV = ½ II, hyaline, 3-nerved; palea small, ovate, obtuse, glabrous.—Hardly different from a *Pollinia.*

UNDESCRIBED SPECIES.

E. vulpinus, *Nees in Royle Ill. Pl. Himal.* 417.

37. **ISCHÆMUM,** *Linn.*

Annual or perennial grasses. *Spikelets* usually 2-fid., in solitary digitate or fascicled articulate fragile spikes, binate, a sessile and pedicelled. *Sessile spikelets, Glumes* 4, I oblong or lanceolate, flat, with inflexed margins, truncate or 2-cuspidate, awnless; II as long as I but narrower, concave, acute obtuse or awned; III hyaline, rarely chartaceous, paleate, triandrous, palea narrow ciliate; IV hyaline, bisexual or fem., usually cleft, awned (rarely awnless), awn inserted in the cleft, or by a minute point below it, branching into 3-nerves; palea linear-lanceolate. *Pedicelled spikelet,* like the sessile, or broader, often imperfect. *Lodicules* cuneate-quadrate. *Anthers* linear. *Styles* long, stigmas long or short.—Species about 40, chiefly tropical.

Ischæmum differs from *Pollinia* in the much larger gl. IV. of the sessile spikelet which is usually cleft into lanceolate lobes, and, except in *I. angustifolium,* in the longer palea of that gl. I find that Hackel's sectional character founded on the shape of the joints is unworkable.

Sect. I. EUISCHÆMUM. *Spikes* 2–3, rarely more. *Gl. I* of sessile spikelets dorsally flat, not deeply channelled or depressed along the mesial line. (See also *I. robustum.*)

* Margins of gl. I narrowly inflexed or incurved from base to apex.

† Leaves rounded at the base, sessile on the sheath.

§ *Pedicel of upper spikelet not ⅓ the length of the lower spikelets.*

1. **aristatum,** *Linn. Sp. Pl.* 1049 (*in part*); perennial, leaves sessile long narrow, spikes 2–3 2–5 in., gl. I of sessile spikelet nearly flat oblong obtuse or notched with 2–4 marginal nodules or low transverse ridges, IV deeply 2-fid, awn geniculately inserted at the cleft, upper spikelet dimidiate-ovate. *Kunth Enum. Pl.* i. 512, *Suppl.* 421; *Hack. Monogr. Androp.* 202. I. imberbe, *Retz. Obs.* vi. 35.—Spodiopogon, *Wall. Cat.* 8861 (= vars. *imbricatum & elatum*).

Throughout the Plains and lower Hills of INDIA, from Sikkim and Bengal to Burma, and southwd. through the Deccan Peninsula to CEYLON.—DISTRIB. China, Malaya.

Stem 1–4 ft., stout or slender, erect or decumbent at the base, simple or branched above. *Leaves* 4–10 in. by ¼–1½ in., finely acuminate, glabrous or silkily hairy, base rounded or narrowed rarely subpetiolate; sheath naked or hirsute; ligule short or 0. *Spikes* stout or rather slender, internodes much shorter than the spikelets, fragile. *Spikelets* ⅙ to nearly ⅓ in., pale or dark, glabrous to villous; gl. I from broadly oblong with a rounded tip to oblong-lanceolate, symmetrical or slightly curved or subdimidiate-oblong, upper ⅓ or ¼ usually herbaceous nerved and with a narrow ciliate wing on one or both sides; II acute or acuminate; IV about ¼ shorter than II, 3-nerved below the insertion of the slender pale awn, which is rarely twice the length of the spikelet; upper spikelet not awned, pedicel very short.—In Hohenacker's specimen of var. *mangaloricum* gl. IV is cleft ¾ way down. In a small form from Salsette (Bombay) Jacquemont n. 374, the keel of gl. II is notched about the middle, winged and serrulate thence to the tip.

The following is Hackel's grouping of some of the more distinct forms of this variable plant. It has the advantage of bringing the authorities and synonyms into some order, but does not include all the definable forms, of which I have added two:—

Subsp. imberbe, *Hack.* l. c. 203; spikelets glabrous, except the callus. I. aristatum, *Burm. Fl. Ind.* t. 21, f. 3 (bad). Meoschium aristatum, *Beauv. Agrost.* 111—Var. *imbricatum*; stout, erect, ligule rather long, gl. I of sessile spikelet 2-noduled on each side, of pedicelled smooth. Meoschium imbricatum, *Munro mss.* Andropogon imberbis, *Steud. Syn. Gram.* 378. Bengal, the Khasia Hills, Ceylon (CP. 869).—Var. *mangaloricum, Hack. l. c.* 204; stout, erect, ligule short, gl. I of lower spikelet surmounted by a broad scarious claw 3–4-noduled on each side, IV deeply cleft. I. geniculatum, *Hochst. in Hohen. Pl. Ind. Or.* n. 184 (*non Roxb.*) Meoschium Arnottianum, *Nees in Nov. Act. Nat. Cur.* xix. *Suppl.* i. (1843) 198. Andropogon geniculatus, *Steud. l. c.*—The Concan and Malabar.—Var. *fallax, Hack. l. c.*; stem slender, base decumbent, ligule minute, gl. I of lower spikelets 3–4-noduled on each side. Meoschium Arnottianum, *Nees in Herb. Wight.* n. 3077. M. monostachys, *Wt. & Arn. ex Steud. l. c.* 369. Andropogon monostachyus, *Steud. l. c.* Central India, the Deccan and Ceylon.

Subsp. barbatum, *Hack. l. c.* 204; spikelets more or less villous, gl. I of lower spikelet 3–4-noduled on each side, the opposite nodules sometimes united by a low ridge. I. barbatum, *Retz. Obs.* vi. 35; *Kunth Enum. Pl.* i. 513. *Benth. Fl. Hongk.* 425; *Thwaites Enum. Pl. Zeyl.* 364; *Trim. Cat. Ceyl. Pl.* 107. Meoschium barbatum, *Beauv. Agrost.* 111. Andropogon barbigerus, *Steud. l. c.* 376.—Var. *elatum Hack. l. c.* 205; tall, branched, sheaths hirsute, ligule ⅙–¼ in. Meoschium elatum, *Nees ex Steud. l. c.* 376. M. Neesianum, *Arn. ex Steud. l. c.* 375. Andropogon, Esenbeckii, and elatus, *Steud. l. c.* 375, 376.

Subsp. Koenigii, *Hook. f.*; tall, very robust, stem as thick as a swan's quill, leaves 1–1½ in. broad, spikes 3 very stout 4 in. long, spikelets ½ in., gl. I of lower oblong-lanceolate acute, IV shortly 2-fid lobes narrow. I. fasciculatum, *Rottler mss.*—Deccan Peninsula, *Koenig.*—Probably a distinct species.

Subsp. Rottleri, *Hook. f.*; stem stout much branched, spikelets ⅕ in. closely imbricate, gl. I of lower linear-oblong, of upper very broad broadly winged on one side nerves of both with anastomosing tips, gl. IV of lower cleft nearly to the base, awn inserted in the cleft, of upper oblong bidentate mucronate in the notch. I. barbatum, *Herb. Rottler.*—Probably from the Deccan. This also may be a distinct species.

2. **I. rugosum,** *Salisb. Ic. Stirp. Rar.* i. t. 1; annual, erect, leaves narrow base contracted, spikes 1–2, gl. I subdimidiately oblong obtuse very convex, coriaceous below and closely transversely ridged membranous above, IV cleft to below the middle awn geniculately inserted at the cleft dorsally lobes lanceolate. *Gærtn. f. Fruct. Suppl.* i. t. 181; *Roxb. Fl. Ind.* i. t. 320; *Hack. Monogr. Androp.* 206; *Thwaites Enum. Pl. Zeyl.* 364; *Trim. Cat. Ceyl. Pl.* 107; *Duthie Grass. N.W. Ind.* 18, *Fodd. Grass. N. Ind.* 31; *Rendle in Journ. Bot.* xxxii. (1894) 103. I. Colladoa, *Spreng. Syst.* i. 298. I. corrugatum, *Herb. Ham. in Wall. Cat.* n. 8864 E. I. Royleanum, *Miq. Fl. Ind. Bat.* iii. 498; *Duthie Grass. N. W. Ind.* 18. I. segetum, *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1883) 294. Meoschium Griffithii, *Nees & Arn. in Ann. & Mag. Nat. Hist.* i. (1838) 284. M. Arnottianum, *Nees,*

elegans, *Arn. & Nees*, rugosum, *Nees*, & Wightianum, *Nees in Nov. Act. Nat. Cur.* xix. *Suppl.* i. (1843) 199, *in Pl. Meyen.* 200. M. Royleanum, *Nees ex Steud. Syn. Gram.* 375. M. rugosum, *Wall. Cat.* n. 8864. M. Wightii, *Nees in Wight Cat.* n. 1719. Andropogon Arnottianus, Griffithsiæ, segetum & Tong-dong, *Steud. l. c.* 375, 376. Apluda rugosa, *Herb. Russ. ex Wall. l. c.* 8864 A. Colladoa distachya, *Cav. Ic.* 37, t. 460.

Throughout INDIA from the Lower Himalaya southwd. to Burma, and the Malay Peninsula, Andaman Islds., and CEYLON.—DISTRIB. China, Malaya.

Stems 1–2 ft., tufted, nodes glabrous or puberulous. *Leaves* 4–10 in.; ligule short. *Spikes* 1–3 in., pale yellow; joints = $\frac{2}{3}$ spikelets, very stout, ciliate. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in., pale yellow; gl. I veined in the upper membranous third; ridges of lower $\frac{2}{3}$ often imbricating like folds; II acute, keeled, scaberulous; III lanceolate, acute, hyaline, paleate; IV nearly = II; awn short or long, very slender, glistening, palea ovate-lanceolate. *Pedicelled spikelets* like the sessile, or imperfect.—Hackel has 3 vars., but I fail to limit them with copious suites of specimens. There are, however, two recognizable forms; one with glabrous joints and pedicels, a glabrous or shortly hairy callus, and imperfect awn, the other with more ciliate nodes and pedicels, a more bearded callus and longer awn.

3. **I. magnum**, *Rendle in Journ. Bot.* xxxii. (1894) 102; tall, stout, leaves linear-lanceolate from a narrow base, spikes 2 appressed 4–7 in. nearly glabrous, gl. I of sessile spikelet oblong-lanceolate very coriaceous and deeply transversely channelled below the middle thinner above and 3–5-nerved with one keel narrowly winged, IV ovate-lanceolate entire apiculate awn 0.

SINGAPORE; at Blakan Mate, *Feilding.*

Stem 6 ft., branched above; branches slender, nodes hairy. *Leaves* 12–20 in., finely acuminate, glabrous above, sparsely hairy beneath; sheaths above villous and scabrid; ligule $\frac{1}{6}$–$\frac{1}{4}$ in., 2-auricled. *Spikes* stout, pale; joints 3-gonous, ciliolate on the outer angle, = $\frac{1}{3}$ shorter than the sessile spikelet, tips very shortly bearded; pedicel of upper spikelet very short stout. *Sessile spikelets* $\frac{1}{4}$ in., oblong, convex, pale yellowish polished, tumid between the transverse channels; II coriaceous, acutely keeled, margins incurved; III lanceolate, acuminate, hyaline, 3-nerved, paleate, palea as long 2-nerved; IV rather shorter, hyaline, ovate-lanceolate, 3-nerved; palea as long, narrowly lanceolate, 2-nerved. *Pedicelled spikelet* as long as the sessile, obliquely convolute, inner margin with 2–3 nodules, outer narrowly winged.

4. **I. molle,** *Hook. f.*; tall, stout, branched, leaves sessile, spikes 1–2 stout densely silkily villous with white hairs, joints broad half as long as the spikelets, gl. I broadly ovate-oblong obtuse smooth dorsally villous all over many-nerved, II obtuse silky keel narrowly winged from the middle upwards, IV shorter cleft to the middle, lobes acuminate ciliate, awn geniculately inserted at the cleft. I. aristatum *var.* intermedium, *Hack. mss.*

The CONCAN? *Herb. Dalzell.* CENTRAL PROVINCES; Chanda district, *Duthie.*

Stem 3–4 ft., soft, solid, quite smooth, leafy. *Leaves* 6–10 by $\frac{1}{4}$–$\frac{1}{3}$ in., finely acuminate, base rounded and cordate, sparsely hairy on both surfaces; sheaths 4–6 in., smooth, glabrous or sparingly hairy above, mouth villous. *Spikes* axillary and terminal, 3–5 in.; joints stout, 3-gonous or concavo-convex, ciliate, tips truncate. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in.; callus very short, broad; gl. I thinly coriaceous, margins narrowly incurved obscurely waved at the base; II chartaceous, wing ciliolate, margins ciliate; III hyaline, ovate, obtuse, 3-nerved, ciliate; palea as long, narrower, obtuse, 2-nerved; IV about $\frac{1}{3}$ shorter than III, awn 2–3 times as long as the gls., golden yellow and shining with a brown column; palea like that of III but smaller. *Upper spikelet* smaller than the lower, awnless, pedicel = $\frac{1}{3}$ of lower spikelet.

§§ *Pedicel of upper spikelet $\frac{1}{3}$ the length of the lower spikelet or more.*

5. **I. diplopogon,** *Hook. f.*; annual, branching upwards, leaves lanceolate from a narrow base, upper sheaths spathiform, spikes 2 pale, peduncle flexuous, joints dorsally ciliate, sessile spikelets $\frac{1}{6}$–$\frac{1}{5}$ in., gl. I oblong 2-cuspidate glabrous shining, II awned 3-nerved lateral nerves pectinately ciliate with stiff hairs above the middle, IV very short 2-fid lobes acute eciliate awned in the cleft.

BOMBAY; near Bhorkus, *Woodrow.*

Stems 12–18 in. or more, branched from the base and upwards, smooth, stout or slender, internodes long, nodes glabrous. *Leaves* 4–6 by $\frac{1}{4}$–$\frac{3}{8}$ in., acuminate, narrowed from below the middle to the base, dark green, rather shining above, margins smooth, nerves 3–4 pairs and midrib very slender; sheath glabrous, of upper leaves open; ligule very short, glabrous. *Peduncles* many from the upper spathiform sheaths, solitary, filiform; spathes 1–3 in., compressed, lanceolate. *Spikes* 1–1$\frac{1}{2}$ in., compressed; pedicelled spikelets divergent; joints and pedicels = $\frac{1}{2}$ the lower spikelets or longer, subclavate, dorsally rounded, ventrally concave. *Sessile spikelets* white; gl. I nerves obscure, margins narrowly incurved; II dorsally smooth, awn as long as itself; III linear-oblong, 1-nerved, eciliate; IV 3-nerved, awn $\frac{1}{2}$ in. capillary, palea very small, oblong. *Pedicelled spikelets* often imperfect, not awned; gl. I elliptic, 2-cuspidate, green, margins white; II acuminate.

6. **I. Kingii,** *Hook. f.*; annual, leaves ovate-lanceolate base rounded or subcordate, hairy beneath, sheaths of uppermost spathiform, spikes 2 ovate pale villous, joints and pedicels very stout densely ciliate tops 3-lobed, sessile spikelet $\frac{1}{5}$–$\frac{1}{4}$ in., gl. I oblong or oblong-lanceolate 2-cuspidate or 2-aristulate dorsally glabrous shining, sides bulging at about the lower $\frac{1}{3}$ keels ciliate above, II awned dorsally rounded with a broad pencil of stiff hairs on the upper third, IV 2-fid lobes stoutly awned between the lobes.

RAJPOOTANA; Mt. Aboo, *King.*

Stem 10–12 in., ascending, glabrous. *Leaves* 1–2 by $\frac{1}{3}$–$\frac{1}{2}$ in., acuminate, rather thin, margins scaberulous, midrib and nerves very slender; sheaths lax, upper open, glabrous; ligule short, membranous. *Peduncles* sheathed, sometimes up to the spikes, slender. *Spikes* 2 in.; joints shining. *Sessile spikelets* with a short rounded bearded callus; keels of gl. I minutely scaberulous; II scabrid, tip 2-toothed; III lanceolate 1-nerved; IV much shorter, 3-nerved, lobes triangular-ovate, eciliate; palea about as long, ovate-lanceolate, 2-nerved, eciliate; awn about 1 in. long. *Pedicelled spikelets* variable, much smaller; gl. I elliptic, acute, many-nerved, flat, margins not incurved; II shortly awned, dorsally nearly naked.

7. **I. augustifolium,** *Hack. Monogr. Androp.* 241; base of stem woolly, leaves long narrow rigid subpungent, spikes 2–4 on axillary and terminal filiform peduncles, gl. I of sessile spikelet lanceolate 2–3-toothed dorsally convex with a tuft of hairs strongly 3-nerved margins not inflexed, II lanceolate 2-toothed aristulate, IV linear entire or 2-toothed shortly awned. *Oliver in Hook. Ic. Pl.* t. 1773; *Kew Bulletin*, 1888, 157. I. sparteum, *Ham. ex Wall. Cat.* n. 8845. Spodiopogon augustifolius, *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1833) 300, *Sp. Gram. Ic.* t. 336. S. laniger, *Nees in Royle Ill. Himal. Pl.* 416; *Steud. Syn. Gram.* 373. S. notopogon, *Nees ex Steud. l. c.* Pollinia eriopoda, *Hance in Journ. Bot.* iv. (1866) 173; *Dyer in Journ. Linn. Soc.* xx. (1883) 409. Andropogon binatus, *Retz. Obs.* vi. 21. A. involutus, notopogon & obvallatus, *Steud. l. c.* —Eriantho affine, *Wall. Cat.* n. 8845.

LOWER HIMALAYA; from Kashmir to Sikkim, ascending to 7000 ft. in Garwhal, *Duthie.* The PANJAB. RAJPOOTANA, on Mt. Aboo. The SATPURA HILLS. BEHAR on Parusnath. CENTRAL INDIA. (Cult. in Bengal, *Kurz.*)—DISTRIB. Affghanistan, China, Philippines.

Stems 2–3 ft., tufted, sparingly branched, slender, grooved on one side, smooth. *Leaves* 1–2 ft. by $\frac{1}{10}$–$\frac{1}{8}$ in., concave or convolute, base obtuse fimbriate, margins scaberulous; sheath glabrous, old basal forming with the wool a thickened mass; ligule a ridge of hairs. *Spikes* 1–2 in., close together or placed apart, erect, golden or rusty villous; joints and pedicels = $\frac{1}{2}$ the lower spikelet, slender, shortly ciliate, bearded at the base. *Spikelets* $\frac{1}{7}$–$\frac{1}{6}$ in., lanceolate, callus hairs short; gl. I subchartaceous, margined with long rufous hairs; II rather longer, 3–5-nerved, ciliate, keel bearded below; III oblong, obtuse, tip ciliate, nerveless, paleate; palea entire or 2-lobed, tip ciliate; IV = II, 1-nerved, awn as long as the spikelet; palea short, ovate, obtuse, tip fimbriate. *Pedicelled spikelets* like the sessile.—Hackel points out that except for the inflorescence this is more a *Spodiopogon* or *Pollinia* than an *Ischæmum*, and should perhaps form a genus. The woolly stem-base recalls *Pollinia velutina* and *phæothrix*.

8 **I. pilosum**, *Hack. Monogr. Androp.* 240; tall, robust, leaves narrow, spikes 2–6 villous, gl. I of sessile spikelet lanceolate bicuspidate translucent dorsally flat or depressed hairy 6-nerved keels scabrid and ciliate, II longer keel ciliate above, IV = III oblong-lanceolate 2-fid, awn short slender inserted between the lanceolate lobes. *Duthie Fodd. Grass. N. Ind.* 31; *Lisboa in Bomb. Journ. Nat. Hist.* vi. (1891) 199. Spodiopogon pilosus, *Nees ex Steud. Syn. Gram.* 373; *Wight Cat.* n. 1692. Andropogon pilifer, *Steud. l.c.* A. pilosus, *Klein ex Willd. Sp. Pl.* iv. 920.—Andropogon, *Wall. Cat.* n. 8817.

AJMEER; at Neemuch, *Jacquemont.* CENTRAL PROVINCES, *Duthie.* The DECCAN PENINSULA, *Heyne, &c.*

Stem very stout, extensively creeping; stolons sheathed; branches 2–3 ft., much divided at the base, nodes glabrous. *Leaves* 6–12 in., flat or convolute, often wiry, coriaceous, glaucous, finely acuminate, glabrous, base and mouth of sheath bearded; ligule membranous, rounded. *Spikes* fascicled, $\frac{1}{2}$-1$\frac{1}{2}$ in., yellow or brownish, rachis hairy, joints and pedicels slender, compressed, subclavate, shorter than the sessile spikelets, sparsely ciliate. *Sessile spikelets* $\frac{1}{6}$–$\frac{1}{4}$ in.; callus minute, bearded with long hairs; gl. I chartaceous, narrowed from the middle upwards, dorsally hairy, nerves anastomosing, margins inflexed from base to tip; II rather longer, chartaceous, laterally compressed, acuminate, 5-nerved; III linear-oblong, obtuse, ciliate above, paleate, male, palea glabrous; IV = III, 3-nerved, lobes ciliolate, awn variable in length; palea narrow or broad, ciliate. *Peduncled spikelets* smaller but like the sessile, or imperfect, sometimes reduced to a single gl.

†† Leaves hastate or cordate at the base, often petioled.

§ *Pedicel of upper spikelet not $\frac{1}{3}$ the length of the lower spikelet.*

9. **I. semisagittatum**, *Roxb. Fl. Ind.* i. 320; annual, slender, prostrate below, leaves oblong- or linear-lanceolate from a broad cordate or sagittate base, spikes 2 villous or glabrescent, joints very short and stout, gl. I of sessile spikelet oblong obtuse flat glabrous transversely undulate or ridged or margins nodulose, II lanceolate acuminate villous or pubescent, IV cleft to the middle or higher, awn dorsal below the cleft. *Kunth Enum. Pl.* i. 513; *Hack. Monogr. Androp.* 208; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vi. (1891) 197. I. conjugatum, *Thw. Enum. Pl. Zeyl.* 365; *Trim. Cat. Ceyl. Pl.* 107; *Hack. l. c.* 205 (*non Roxb.*). Meoschium semisagittatum, *Schult. Mant.* ii. 435. Spodiopogon semisagittatus, *Voigt Hort. Suburb. Calc.* 706. Andropogon semisagittatus, *Steud. Syn. Gram.* 376.

BENGAL, *Roxburgh.* The DECCAN, CONCAN, and CANARA, *Stocks, Talbot.* CEYLON, *Thwaites* (C.P. 3263).

Stem 12–24 in., slender, flaccid, leafy, pale, internodes long, nodes glabrous or hairy. *Leaves* 3–5 in., finely acuminate, flaccid, 3–5-nerved, glabrous or sparsely hairy, margins smooth, costa slender, lower with a filiform petiole ½–1½ in. long; sheaths long, upper often ventricose and open, margins and ligule ciliate. *Spikes* 1–2½ in., more or less villous with white or grey hairs; joints trigonous, clavate. *Sessile spikelets* ⅙–¼ in., gl. I thin, green, dorsally villous, margins narrowly inflexed chiefly below the middle; II lanceolate, acuminate, dorsally rounded; III lanceolate, 1-nerved, paleate; IV glabrous or lobes ciliate, 3-nerved, awn ½–⅔ in.; palea longer than the gl. *Pedicelled spikelets* very shortly broadly pedicelled; gl. I 7–9-nerved, winged above on one side.—I have not seen Huegel's specimens which alone Hackel describes, and for which no habitat is given. The leaf-margins of the specimens I have seen are scarcely "scaberrimæ." Hackel has two vars.: *α. genuinum*, spikelets glabrous, joints dorsally smooth; *β. dasyanthum*, gl. I at least of upper spikelet appressedly villous, joints scabrid with hairy margins and dorsal keel.

Var. *glabrescens*; spikes more slender, joints shortly villous, gl. I shining glabrous transversely undulate below the middle, IV bicuspidate, awn sometimes inserted half-way between the base and sinus, or bipartite and awn geniculately inserted at the cleft.

10. **I. conjugatum,** *Roxb. Fl. Ind.* i. 321; annual, prostrate below, leaves short base hastate or broadly deeply cordate, spikes 2 short villous, joints very short ciliate, gl. I of sessile spikelet oblong obtuse flat 2-toothed villous even or lower margins obscurely nodose, II lanceolate acuminate puberulous, IV cleft to about the middle, awn dorsally inserted at or below the cleft. *Kunth Enum. Pl.* i. 513; *Hack. Monogr. Androp.* 205. Spodiopogon conjugatus, *Voigt Hort. Suburb. Calc.* 706. Andropogon cordatifolius, *Steud. Syn. Gram.* 376.

BENGAL; near Calcutta, *Roxburgh.* The CONCAN, *Stocks.* CEYLON (naturalized) *Trimen.*

Stem spreading from the root and creeping, then geniculately ascending, 12–18 in. high, slender, stiff, purplish, repeatedly branching upwards. *Leaves* 1–1½ in., acuminate, broadest at the base, rather rigid, striate, lower petioled; sheath of the upper ventricose and often open; ligule short, glabrous. *Spikes* 1–1½ in., sessile; joints quadrately clavate, plano-convex. *Spikelets* ⅛ in., pale; gl. I more or less villous from below or above the middle to nearly the top, margins narrowly inflexed not winged, upper half often greener; II strongly keeled, puberulous; III paleate; IV awn slender about twice as long as the spikelet. *Pedicelled spikelets* subsessile, almost awnless; gl. I as in the sessile.—I have seen only Concan specimens, they agree with Roxburgh's character and figure, except in the nodes being hardly villous.

§§ *Pedicel of upper spikelets* = ⅓ *the length of the lower spikelet, or longer.*

11. **I. commutatum,** *Hack. Monogr. Androp.* 209; slender, prostrate below, leaves short cordate lower petioled, spikes 2, gl. I of sessile spikelet oblong obtuse or acute 2-toothed flat dorsally undulate tip faintly winged margins obscurely nodulose, II acuminate keeled, IV cleft to the middle, awn inserted by a broad base between the ciliate lobes. *Trim. Cat. Ceyl. Pl.* 107. I. semisagittatum, *Thw. Enum. Pl. Zeyl.* 365 (*non Roxb.*).

NILGHIRI HILLS; Conoor, alt. 7000 ft., *Clarke.* CEYLON; Ambagamowa district, *Thwaites* (C.P. n. 2625).

Stem 6–12 in., branching upwards from a decumbent base, nodes glabrous. *Leaves* 1–3 in., linear-lanceolate, acute, softly hairy, margins scabrid; sheath smooth or hairy and keeled above; ligule rounded. *Spikes* 1–1½ in.; joints = about ½ the sessile spikelet, shortly ciliate. *Sessile spikelets* ⅕-¼ in., green or dark-colrd.; callus bearded; gl. I coriaceous, keels glabrous narrowly winged above; II ovate-lanceolate, keel obtuse smooth; III lanceolate, 3-nerved, paleate; IV shorter, oblong, glabrous, awn ½–⅔ in., palea minute. *Pedicelled spikelets* smaller, awnless; gl. I 5–7-nerved, winged on one side.

12. **I. impressum,** *Hack. Monogr. Androp.* 210; slender, prostrate below, leaves ovate- or oblong-lanceolate cordate lower narrower petioled, spikes 2 villous, gl. I of sessile spikelets linear-oblong flat dorsally broadly irregularly depressed with shallow subsemilunar pits in the lower ⅔ above it winged and 2-cuspidate, II dorsally rounded with a median gibbosity and an auricle-like wing above it, IV cleft to above the middle, awn short geniculately inserted at the cleft.

INDIA, *Huegel.* The CONCAN? *Herb. Dalzell.*

Stem 4–8 in., quite glabrous, branching upwards. *Leaves* 2–3 in., upper ¾ in. broad, sparsely hairy beneath, margins thickened, scaberulous, sometimes crenulate; sheath compressed, glabrous; ligule oblong. *Spikes* yellow; joints and pedicels stout, clavate, ciliate with rigid hairs, forked at the top. *Sessile spikelets* ¼–⅓ in., shining; callus short, broad, bearded; gl. I narrowed and margins subnodulose at the base, wings erose; II obtuse, chartaceous, ciliate; III oblong-lanceolate, hyaline, 3-nerved, ciliate; IV much shorter, glabrous; awn 1–1¼ in., with very stout column and golden tip; palea oblong, obtuse, glabrous. *Pedicelled spikelets* smaller than the sessile; gl. I obtuse, glabrous, many-nerved, winged on one margin; II 7-nerved; IV mucronate.—I have seen only a fragmentary specimen in Dalzell's Herbarium. The sculpturing of gl. I probably varies.

13. **I. Feildingianum,** *Rendle in Journ. Bot.* xxii. (1894) 101; stem robust branched above, leaves lanceolate cordate, spikes 2 appressed silkily hairy of gl. I, sessile spikelets broadly oblanceolate flat coriaceous and glabrous below the middle hairy above with 6–8 nerves anastomosing at their tips, keels scaberulous, II 6-nerved keeled aristulate, IV deeply 2-fid, awn inserted between the broad obtuse lobes.

MALAY PENINSULA; Mt. Ophir, *Feilding.*

Upper leaves 4–5 by ½–¾ in., narrowed from the base to the acuminate tip, rigid, pubescent beneath, 16–20-nerved; sheath pubescent; ligule short, truncate. *Spikes* 3–3½ in., erect, fragile, peduncle villous towards the tip; joints and pedicels stout, trigonous, about ¼–⅓ shorter than the spikelet, angles and excised hollow tips long-ciliate. *Sessile spikelets* ¼ in., narrowed to the base; callus cuneiform, densely bearded; gl. I obtuse or 2-toothed, keels very narrowly winged towards the tip; II rather longer than I, scabrid above and narrowed into the short recurved awn; III ovate-oblong, obtuse, hyaline, faintly 3-nerved; palea as long, lanceolate, subchartaceous, with broad rounded hyaline wings; IV hyaline, subscaberulous, awn about ½ in.; palea as long as the gl., lanceolate, 2-nerved. *Pedicelled spikelets* smaller, keels of gl. I winged on one side; IV not awned.

** Margins of gl. I of sessile spikelet broadly incurved below the middle.

† *Keel of gl. II winged above the middle* (*see also* I. murinum).

14. **I. muticum,** *Linn. Sp. Pl.* 1049; glabrous, creeping, branches erect leafy, leaves ovate to lanceolate rigid, spikes 2 short stout glabrous, gl. I of sessile spikelet oblong 2-toothed smooth keels narrowly winged above, II acuminate keel winged above the middle, IV oblong shortly 2-fid shortly awned between the acute ciliate lobes. *Gærtn. f. Fruct. Suppl.* 1, t. 181; *Kunth Enum. Pl.* i. 512; *Hack. Monogr. Androp.* 212; *Wall. Cat.* n. 8865; *Wight Cat.* n. 1716, *Herb.* n. 3078; *Thw. Enum. Pl.*

Zeyl. 364; *Trim. Cat. Ceyl. Pl.* 107; *Benth. Fl. Austral.* vii. 520. I. glabratum, *Presl Rel. Hænk.* i. 328. I. repens, *Roxb. Fl. Ind.* i. 323; *Wight Cat.* n. 1715. Andropogon muticus, polymorphus, relictus & repens, *Steud. Syn. Gram.* 374, 375, 377, 374.

The DECCAN PENINSULA, from Canara southwd. BURMA, the MALAYAN PENINSULA and LACCADINE ISLDS. CEYLON, common.—DISTRIB. China, Malaya, Australia.

Rootstock very stout, creeping for several feet in sand; branches 2–10 in., stout, usually leafy up to the spike; nodes glabrous. *Leaves* 1–6 in., rarely more, sessile or subsessile, flat, stiff, base rounded or cordate, brown when dry; sheath smooth; ligule obscure. *Spikes* 1–1½ in., joints and pedicels stout, 3-gonous, = about half the sessile spikelet, truncate, shortly ciliate. *Sessile spikelets* ⅛–⅙ in., glabrous, callus very large, smooth; gl. I acute, thickly coriaceous, shining, obscurely many-nerved, dorsally ciliate above the middle, margins below broadly incurved; II larger, rigid, glabrous, 5-nerved; III oblong, obtuse, glabrous, palea with a narrow hyaline wing; IV = II, chartaceous, convolute, 5-nerved; palea oblong-lanceolate, keels ciliate. *Pedicelled spikelets* laterally compressed; gl. I with the margin on one side inflexed and broadly winged, concave, hairy; gl. IV usually bisexual.

15. **I. Lisboæ**, *Hook. f.*; stem creeping below, leaves oblong acute and open sheaths villously tomentose, spikes 2 softly tomentose, gl. I of sessile spikelets oblong 2-fid convex keels with broad auricular ciliate wings, II coriaceous scabridly awned keel winged above the middle, IV oblong, obtusely 2-lobed, awn slender inserted between the rounded lobes.

NORTH CANARA, *Lisboa.*

Stem very stout, rooting at the thickened nodes; branches ascending 8–14 in., glabrous. *Leaves* on the creeping stem 1–2 in., closely imbricating in two series, the blades reflexed at right angles to the erect short open sheaths, softly tomentose on both surfaces; lower sheaths ½–1 in., villous; ligule short, bearded with very long hairs. *Spikes* 2 in., joints and pedicels about half as long as the spikelets, stout, concavo-convex, shortly villous, truncate. *Sessile spikelets* ⅓ in., callus very large, glabrous; gl. I thickly coriaceous, dorsally convex, ciliate above the middle, margins broadly incurved below the middle; II rather longer, rigid, dorsally rounded below the wing; III ovate-oblong, obtuse, margins ciliate, paleate, male; palea chartaceous, obovate, 2-nerved, nerves meeting at the tip with very broad hyaline wings above the middle; IV = ⅔ II, 3-nerved below the middle, awn about twice as long as the spikelet; palea lanceolate, nerves ciliate. *Pedicelled spikelets* laterally compressed; gl. I convex, broadly winged, villous; IV shortly awned or awnless.—The habit of the only good specimen I have seen is very peculiar.

16. **I. ciliare,** *Retz. Obs.* vi. 36; erect or decumbent below, leaves linear, spikes 2–3 villous, gl. I oblong or obovate-oblong convex 5–7-nerved 2-lobed or 2-fid from the keels ending in 2 terminal wings, II acuminate or awned dorsally rounded keeled and winged above the middle, IV obovate-oblong cleft to the middle awned in the cleft. *Kunth Enum. Pl.* i. 513 (*excl. syn.*); *Hack. Monogr. Androp.* 225; *Trim. Cat. Ceyl. Pl.* 107; *Wight Cat.* n. 2322. *Duthie Fodd Grass. N. Ind.* 30; *Benth. Fl. Austral.* vii. 520 (*var.*? podostachyum). I. aristatum, *Willd. Sp. Pl.* iv. 939; *Roxb. Fl. Ind.* i. 319. I. barbatum, *Herb. Ham. ex Wall. Cat.* n. 8860 A. I. geniculatum, *Roxb. Fl. Ind.* i. 322. I. scrobiculatum, *Wight & Arn. ex Steud. l. c.* 373. I. tenue, *Herb. Ham. ex Wall. Cat.* n. 8866. Spodiopogon ciliaris, *Nees ex Steud. Nom. Ed.* II. ii. 625; *Wight Cat.* n. 1693. S. obliquivalvis, *Nees in Nov. Act. Nat. Cur.* xix. *Suppl.* i. (1843) 185, *Thw.*

Enum. Pl. Zeyl. 365; *Wight Cat.* n. 1693; *Wall. Cat.* n. 8588; *Duthie Grass. N.W. Ind.* 16; *Benth. Fl. Hongk.* 426. S. scrobiculatus, *Nees in Wight Cat.* n. 1694, & zeylanicus, *Nees ex Steud. l. c.* 373, 377. S. villosus, *Nees in Hook. & Arn. Bot. Beech. Voy.* 242. Andropogon bifidus, incertus, Macræi, simillimus, patenti-villosus, & Retzii, *Steud. l. c.* 373–377. A. Macræi, *Steud. l. c.* 377. A. malacophyllus, *Hochst. ex Steud. l. c.* 372.—Spodiopogon, *Wall. Cat.* n. 8859, 8860, 8862.

BENGAL and the LOWER HIMALAYA, from Nepal to Assam, SILHET and BURMA, and southwd. to TRAVANCORE, the LACCADINE ISLDS, *Alcock,* and GT. COCOS ISLD., *Prain.* CEYLON.—DISTRIB. China, Malaya, Australia.

Stem 6 in. 2 ft., stout or slender, tufted, leafy, sometimes creeping; nodes glabrous or bearded. *Leaves* 2–6 in., glabrous pubescent or villous; sheath glabrous or hirsute; ligule short, ciliate. *Spikes* 1½–2 in., rather stout; joints and pedicels = about ½ the spikelets, straight or incurved, ciliate, truncate. *Spikelets* ⅛–⅕ in.; gl. I polished, glabrous or villous, sometimes pitted, upper part scrobiculate or not, terminal wings erose or ciliolate, scaberulous, margins broadly inflexed below; II glabrous, or dorsally ciliate, aristulate; III oblong, 1–3-nerved, ciliate, paleate, male; palea with a chartaceous lanceolate centre, and broad hyaline wings; IV glabrous or ciliolate, awn very slender, about twice as long as the spikelet. *Pedicelled spikelets* rather smaller than the sessile, gl. I acute.—A very common and variable plant, of which Hackel has 3 varieties and 4 Indian subvarieties as follows:—

Var. α. *genuinum,* Hack.; joints and pedicels diverging at the base, spikelets continuous with the callus, gl. IV of pedicelled spikelets usually awned.—1, *prorepens,* stem creeping, branches erect, gl. I not scrobiculate; 2, *scrobiculatum,* habit of α, spikelets smaller, gl. I scrobiculate.—3, *malacophyllum,* tall, gl. I broadly winged at the tip, keel of II ciliate.—4, *villosum*; leaves and sheaths villous.

Var. β. *Wallichii,* Hack.; tall, joints and pedicels not divergent at the base, sessile spikelet suddenly constricted at the long bearded callus, gl. IV of pedicelled spikelet imperfectly awned.

Var. γ. *longipilum,* Hack.; joint and pedicels as in β. Spikelets glabrous with a long bearded callus, pedicelled spikelet long-awned.

17. **I. heterotrichum,** *Hack. Monogr. Androp.* 220; stem prostrate then ascending, leaves linear-lanceolate from a rounded base, spikes 2 stout erect, gl. I of sessile spikelet rhombic-lanceolate upper part triangular acute dorsally smooth glabrous 4-nerved tip membranous 2-toothed keels broadly winged, II subcoriaceous keel winged above, III ovate 3-nerved, IV shorter broadly oblong shortly 2-toothed awned in the notch. ?Andropogon comorensis, *Steud. Syn. Gram.* 431.

NICOBAR ISLDS., *Jelinek.*—DISTRIB. Madagascar, Seychelles.

Stem about 20 in. high, slender, compressed, quite glabrous. *Leaves* 2–6 by ⅓–1⅓ in., glabrous or base fimbriate, margins undulate, scabrid, base contracted at the junction with the compressed loose keeled sheath; ligule very short, truncate, ciliate. *Spikes* 2–2¼ in., erect, compressed, joints and pedicels half as long as the spikelet, bearded. *Sessile spikelet* ⅓ in.; callus bearded at the base; gl. I tip membranous 2-toothed, 4-nerved above, margins involute below the middle; II mucronulate, margins ciliolate; III shorter, chartaceous, ovate, acuminate, 3-nerved ciliate, paleate; IV short, ciliolate, awn more or less imperfect confluent with the gl. *Pedicelled spikelets* ¼ in., gl. I winged from below the middle upwards, 7-nerved glabrous.—Descript. from Hackel. In a Seychelle Isld. specimen which I have examined the keel of gl. II is not dorsally winged, and gl. IV is hyaline 5-nerved with lanceolate acuminate ciliate lobes.

†† *Keel of gl. II. not winged* (*or winged* in I. murinum).

18. **I. murinum,** *Forst. Fl. Ins. Austr. Prodr.* 73; slender, erect or prostrate below, much branched, leaves narrowly linear, spikes 2–3 slender villous, gl. I of sessile spikelets oblong acuminate 2-cuspidate or 2-mucronate faintly 5–7-nerved, keels rounded not winged, II long-beaked awned, IV cleft to the middle, awn long stout inserted between the large eciliate lobes. *Kunth Enum. Pl.* i. 571, *Suppl.* 419; *Hack. Monogr. Androp.* 223. Andropogon murinus, *Steud. Syn. Gram.* 377.—Spodiopogon, sp. 9, *Herb. Ind. Or. Hook. f. & T.*

MYSORE or the CARNATIC, *G. Thomson.*—DISTRB. Tanna Isld. (New Caledonia).

Stems 1–2 ft., very slender, erect or prostrate and geniculate at the base, branching upwards; nodes bearded. *Leaves* 2–4 by $\frac{1}{8}$-$\frac{1}{4}$ in., sessile, flaccid, setaceously acuminate, narrowed to the rounded base, midrib vanishing upwards; sheath scaberulous; ligule oblong, membranous. *Spikes* 1–$1\frac{1}{2}$ in., often sheathed by the upper leaves, drying red-brown; joints and pedicels = $\frac{1}{3}$ spikelet, rather slender, trigonous, long-ciliate, tops 3-toothed concave. *Sessile spikelets* $\frac{1}{5}$ in., red-brown, callus long, stout, unilaterally stiffly bearded; gl. I dorsally polished, sparsely ciliate with long stiff hairs above the middle, margins ventricosely incurved below the middle; II longer than I, inserted below it on the callus, dorsally convex, faintly 3-nerved, beak 2-toothed with a long or short very slender awn, keel above shortly winged or not; III male, oblong-lanceolate, acute, 1-nerved, margins incurved; palea as long 2-nerved, nerves convergent in the tip scaberulous with broad hyaline wings, IV = II, female, glabrous, awn dilating at its insertion into a semilunar ridge; palea as long as the gl., ovate, lanceolate, 2-nerved at the base. *Styles* very long, stigmas short. *Pedicelled spikelets* nearly as the sessile.—This species is contained in an extensive Herbarium formed by G. Thomson, Esq. (brother of the late Superintendent of the Calcutta Botanical Gardens). The flowers in each spikelet are strictly unisexual.

19. **I. hirtum,** *Hack. Monogr. Androp.* 228; stout, suberect, leaves long, spikes few or many, gl. I of sessile spikelet lanceolate acuminate or 2-cuspidate 6–9-nerved villous above or glabrate, II aristulate dorsally rounded, IV oblong acutely 2-lobed ciliate awned in the cleft. I. rivale, *Hack. l. c.* Spodiopogon rivalis, *Thw. mss.*

BENGAL, BEHAR and the KHASIA HILLS, alt. 4–6000 ft. CHOTA NAGPORE and CENTRAL INDIA. NILGHIRI HILLS, alt. 5000 ft. CEYLON; Mateke East, *Beckett.*

Stem 2–3 ft., nodes glabrous or sparsely bearded. *Leaves* 4–8 by $\frac{1}{4}$–1 in., finely acuminate, base narrowed or rounded, glabrous or sheath sparsely hairy; ligule short, ciliate. *Spikes* 2–20, 1–4 in., joints and pedicels subequal, rather slender, trigonous, ciliate. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in.; callus long-bearded; gl. I more or less herbaceous, 6–9-nerved above the middle, margins broadly incurved below; II inserted below I on the callus, sometimes 2-dentate, 3–5-nerved, villous or glabrate; III oblong-lanceolate, acuminate, faintly 3-nerved, ciliate, paleate, male or neuter; palea oblong, centre chartaceous with hyaline ciliate wings; IV ciliolate; awn very slender, $\frac{1}{5}$–$\frac{1}{4}$ in., confluent with the gl., base semilunar; palea as long as the gl. *Pedicelled spikelets* gl. I awned, narrowly winged or not.—The Nilghiri plant is a very tall stout form, with long leaves, and a corymbiform fascicle of more than 20 spikes, its gl. IV is more deeply cleft, and the awn is not produced downwards in the body of the gl.

Hackel, who was not aware how widely spread and variable a species it is, keeps *I. hirtum* and *rivale* as distinct species, thus distinguished :—*I. hirtum,* leaves hirsute on both surfaces, spikes 2–3, gl. I of sessile spikelet entirely chartaceo-herbaceous with 7–9 percurrent nerves, densely hirsute in the upper half.—Khasia Hills. *I.*

rivale, leaves quite glabrous, spikes about 4, gl. I. chartaceous 6–7-nerved in the upper glabrous with the margins sparsely hairy.—Ceylon.

20. **I. timorense**, *Kunth Revis. Gram.* i. 369, t. 98, *Enum. Pl.* i. 512, *Suppl.* 419; slender, decumbent below, leaves sessile and petioled, spikes 2–3 sparingly villous, gl. I ovate or ovate-lanceolate acuminate bicuspidate 5–9-nerved base ventricose, II longer acuminate or aristulate dorsally rounded, IV short 2-lobed awn in the cleft very slender. *Hack. Monogr. Androp.* 229; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vi. (1891) 198. I. tenellum, *Roxb. Fl. Ind.* i. 323. Spodiopogon Blumii, *Nees ex Steud. Syn. Gram.* 373. Andropogon Asthenos, *Steud. l. c.* A. timorensis, *Steud. l. c.* 376.—Ischæmum n. 4, *Griff. Notul.* 91, *Ic. Pl. Asiat.* t. 148, f. 1.—Spodiopogon, *Wall. Cat.* n. 8863.

Bengal, *Roxburgh*, Silhet, *Clarke.* Chittagong, *J. D. H. & T. T.* Burma, *Wallich.* Canara and the Central Provinces, *Duthie*, &c. Malayan Peninsula. Ceylon, *Thwaites* (C.P. 963, 3168).—Distrib. Malay and Pacific Islds.

Stem 6–18 in., branched and straggling, nodes glabrous or sparingly bearded. *Leaves* 1–4 in., linear-lanceolate, acuminate, glabrous or sparsely hairy, base of upper rounded, of lower narrowed; sheath lax, mouth hairy; ligule obscure. *Spikes* 1–2 in., rather slender; joints and pedicels about half as long as the spikelet, nearly equal, shortly ciliate. *Sessile spikelets* $\frac{1}{10}$–$\frac{1}{8}$ in., greenish, or with green nerves; callus narrow, long-bearded; gl. I margins broadly involute below, subauricled, dorsally convex, polished, nerves strong; II recurved, 3–5-nerved, tip 2-toothed, dorsally usually ciliate; III lanceolate, paleate, palea linear-oblong; IV glabrous, awn very slender shortly exserted. *Pedicelled spikelets* like the sessile, awned.—A very variable plant, in the form of the leaves especially. Hackel gives four varieties founded on inconstant characters of the leaves and length of the awn. I have little doubt that *I. tenellum*, Roxb., is *I. timorense.* Hackel doubtfully refers it to *ciliare*, of which it has none of the marked characters.

Sect. II. Sehima (Forsk. Gen.). *Spikes* solitary. *Gl. I* of sessile spikelet deeply channelled or depressed along the median line (except *I. notatum*).

21. **I. laxum**, *Br. Prodr.* 205; perennial, leaves linear scaberulous base narrowed, gl. I of sessile spikelet linear-oblong glabrous 2-cuspidate with a broad membranous translucent depression bounded by two strong flexuous submarginal nerves, nodose in the upper half, II awned, IV 2-fid awned between the lanceolate ciliate lobes, *Hack. Monogr. Androp.* 243; *Trim. Cat. Ceyl. Pl.* 107; *Duthie Fodd. Grass. N.W. Ind.* 31, t. 58; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vi. (1891) 199; *Benth. Fl. Austral.* vii. 522. I. inscalptum, *Hochst. in Flora* (1844) 247; *A. Rich. Tent. Fl. Abyss.* ii. 472. I. macrostachyum, *Hochst. ex A. Rich. l. c.* I. montanum, *Herb. Russ. ex Wall. Cat.* n. 8818 A. I. nervosum, *Thw. Enum. Pl. Zeyl.* 365. I. Sehima, *Spreng. Syst. Veg.* i. 298. Hologamium nervosum, *Nees in Edinb. N. Phil. Journ.* xviii. (1835) 185; *Wight Cat.* n. 1689. Sehima ischæmoides, *Forsk. Fl. Æg. Arab.* 178. S. Kotschyi, *Hochst. l. c.* S. macrostachyum, *Hochst. in Schimp. Pl. Abyss.* n. 1705. Pollinia striata, *Spreng. Pugill.* ii. 12. Andropogon Brownii, *Kunth Revis. Gram.* i. 163. A. lineatus, Robertianus, Sehima & tacazensis, *Steud. l. c.* 369. A. macrostachyus & inscalptus, *Anderss. in Schweinf. Beitr. Fl. Æthiop.* 310. A. nervosus, *Rottl. in Ges. Naturf. Fr. N. Schrift.* iv. (1863) 218; *Steud. l. c.* A. striatus, *Klein ex Willd. Sp. Pl.* iv. 903; *Br. Prodr.* 201; *Spreng. l. c.* 298. A. schangulensis, *Rupr. in Kotschy Hist. Æthiop.* n. 581; *Steud. l. c.* 369.—Andropogon, *Wall. Cat.* n. 8818.

RAJPOOTANA and the CENTRAL PROVINCES, *Duthie.* The DECCAN, *Heyne,* &c. BURMA, *Wallich,* &c. CEYLON, *Thwaites.*—DISTRIB. eastwd. to Australia, and westwd. to the Cape Verd Islds.

Stems 2–3 ft., tufted on a short stout creeping rootstock, stout or slender, nodes glabrous. *Leaves* 6–10 in., glaucous, tips filiform, nerves strong; sheath ribbed glabrous or hairy; ligule of silky hairs. *Spikes* 2–5 in., erect, pale, joints rather coherent; pedicels rather slender, compressed, 2-angled, ciliate, about half as long as the sessile spikelet. *Sessile spikelets* $\frac{1}{6}$–$\frac{1}{4}$ in., callus shortly bearded; gl. I narrow, nearly flat, nerves very strong especially upwards, those between the lateral irregular in position and length, often anastomosing, margins narrowly incurved; II elliptic, 2-toothed, keel narrowly winged below the slender awn; III linear-oblong or lanceolate, acute, ciliate, palea as long glabrous 2-nerved; IV = $\frac{1}{2}$ III, oblong, 3-nerved, ciliate; awn 1$\frac{1}{4}$–2 in., column stout; palea = the gl., linear-lanceolate, 2-nerved, ciliate. *Pedicelled spikelets*; gl. I ovate-lanceolate, 2-cuspidate, green or purplish, keels narrowly margined, nerves 5–7 very strong scaberulous, lateral pairs close to the margin; II lanceolate, 3-nerved, acuminate; IV awnless.

22. **I. sulcatum,** *Hack. Monogr. Androp.* 248; stem simple or branched from the base, leaves linear or lanceolate scaberulous, base rounded or subcordate, gl. I of sessile spikelet narrowly linear-lanceolate glabrous, tip acuminate 3-cuspidate dorsally convex with a narrow deep median channel margins incurved, nerves obscure, II linear-lanceolate 2-cuspidate awned, IV 2-fid awned between the lobes.

The CONCAN, DECCAN and CENTRAL PROVINCES, &c.

Stems 8–18 in., usually much branched with many solitary terminal spikes, slender, glabrous, nodes glabrous, peduncles very slender. *Leaves* 2–10 in., glaucous, scaberulous above, setaceously acuminate, strongly nerved; sheath slender, smooth; ligule a ciliate membrane. *Spikes* 2–3 in., strict or curved, green; joints and pedicels = $\frac{1}{2}$ the lower spikelet, slender, ciliate, tips obliquely truncate. *Sessile spikelets* $\frac{1}{5}$ in.; callus short, bearded; gl. I scaberulous, tip setiform, keel narrowly margined or winged towards the tip on one side, or simply scaberulous, nerves 2 on each side the furrow; II chartaceous, keel scabrid and margins ciliate above the middle, awn capillary; III = $\frac{2}{3}$ I, hyaline, acute, paleate, ciliate, palea as long truncate; IV linear-oblong, 3-nerved; awn $\frac{3}{4}$–1$\frac{1}{4}$ in., column stout, brown; palea = the gl. 2-nerved. *Pedicelled spikelets* smaller than the sessile, neuter, awnless; gl. I lanceolate, 2-cuspidate, 7-nerved, not channelled, margins incurved, keels margined or winged; II not awned; III as in the sessile spikelet; IV acute not awned.—Varies greatly in habit from a single ascending stem with one spike to a copiously branched one with many spikes. Hackel describes gl. IV of the sessile spikelet as narrowed into the awn, not 2-fid as I find it.

23. **I. ramosissimum,** *Hack. Monogr. Androp.* 249; stem erect excessively paniculately branched, spikes short in leafy panicles glabrescent, gl. I of sessile spikelet linear-oblong very obtuse emarginate 8-10-nerved deeply channelled between the median nerves margins involute not keeled aculeolately ciliate above, II obtuse mucronulate 5-nerved keel scabrid above with a pencil of hairs, III linear obtuse 3-nerved ciliate paleate, IV = II narrowly linear 1-nerved glabrous narrowed into a stout awn.

E. INDIES? *Huegel.*

Stem 3–4 ft. *Leaves* linear-lanceolate, glaucous, glabrous, margins scabrid; ligule chartaceous, truncate. *Spikes* 1–1$\frac{1}{2}$ in., straw-colrd., joints linear, compressed, shortly rigidly ciliate, tips excised. *Sessile spikelets* $\frac{1}{4}$ in. *Pedicelled spikelets* $\frac{1}{4}$–$\frac{1}{3}$ in., linear-lanceolate; gl. I flat acuminate many-nerved; II linear, obtuse, 5-nerved; IV awnless.—The two lowest pair of spikelets are imperfect and awnless. I know nothing of this plant.

24. **I. spathiflorum,** *Hook. f.*; tall, stout, much branched above, spikes enclosed in long narrow spathes very slender, joints and pedicels long, sessile spikelets ⅓ in. narrowly linear-lanceolate, gl. I of sessile spikelet dorsally deeply channelled densely silkily villous to above the middle, keels rounded scabrid above, II truncate and mucronulate, IV linear-oblong, awn slender inserted between 2 subulate teeth. Trachypogon fasciculatus, *Munro mss.*

BOMBAY; hills of Salsette Isld. in stony places, *Jacquemont* (n. 797).

Stem 3–4 ft., as thick as a goose-quill below, leafy above, branches erect, nodes glabrous. *Leaves* 12–18 by ¾ in., finely acuminate, narrowed from the middle to the base, almost petioled, thin, sparsely hairy above and beneath, margins smooth, midrib stout pale, nerves obscure; sheath of lower 6 in. and upwards, terete, quite glabrous, of upper passing into compressed lanceolate flg. spathes 3–4 in. long, which alternate in very slender axillary branchlets, the lower with leafy tips; ligule short, scarious. *Spikes* about 2 in. long, more or less exserted from the spathes, very slender, pale straw-colrd.; joints and pedicels more than half as long as the sessile spikelet, compressed, one angle ciliate. GL. I of *sessile spikelet* white with silky hairs, thinly coriaceous, nerveless, dorsal channel slender transparent forming a ridge ventrally, margins equally involute from base to 2-fid or truncate 2-cuspidate tip; callus very short, bearded; II chartaceous, dorsally convex, nerveless but with a nerve-like fold towards the ciliate margin, keel with long cilia above the middle, scabrid towards the emarginate tip; III shorter, hyaline, oblong-lanceolate, obtuse, 3-nerved, margin above with reflexed hairs; palea lanceolate, 2-nerved, anthers imperfect; IV as long as III, linear, 3-nerved; awn 1½ in., yellow, rather testaceous, palea 0. *Pedicelled spikelets* longer, ½ in.; gl. I dorsally convex (not sulcate), shortly silky, narrowed into a long bisetose glabrous awn.—A very curious species, of which the materials are in rather a young state; it should form a section by itself of *Sehima* were that genus to be restored.

25. **I. notatum,** *Hack. Monogr. Androp.* 246; stems tall tufted, leaves linear narrowed from the base upwards, rigid substrigose, spikes rather stout fragile, gl. I of sessile spikelets oblong, gl. I ovate-oblong glabrous, tip membranous 2-cuspidate dorsally flat with 2 carinal nerves and 2–3 intermediate short green anastomosing ones, keels margined or winged, II 3-nerved shortly awned, IV shorter oblong 2-fid ciliate awned in the cleft.

WESTERN HIMALAYA, alt. 4–7000 ft., from Chamba, *Thomson*, to Kumaon, *Strachey & Winterbottom.*

Stem erect, naked or pubescent below the spike, nodes glabrous. *Leaves* 6–10 by ⅛–⅕ in., setaceously acuminate, green or hoary; sheath bearded at the tip; ligule of long hairs. *Spikes* 3–8 in., strict or curved, fragile, puberulous; joints and pedicels subclavate, half as long as the sessile spikelet, villously ciliate, tips obliquely truncate. *Sessile spikelets* ⅓ in., callus short bearded; gl. I obliquely ovate-oblong, tip membranous, margins very narrowly inflexed, keels one or both narrowly winged; II chartaceous, entire, 3-nerved, keeled and narrowly winged in the upper third; III oblong, obtuse, ciliate, 2-nerved, palea 2-nerved eciliate; IV 3-nerved, awn ¾–1 in.; palea linear-lanceolate. *Pedicelled spikelet*, gl. I lanceolate, acuminate, 2-cuspidate, 7–9-nerved; II lanceolate, acute, glabrous; III as in the sessile; IV awnless.

Sect. III. Spikes few or many, subracemose. *Gl. I* of sessile spikelet deeply or obscurely channelled along the mesian line.

26. **I. petiolare,** *Hack. Monogr. Androp.* 238; tall, stout, leaves long narrowed at the base or petioled, spikes many subpaniculately fascicled, gl. I linear-oblong keels narrowly winged towards the 2-toothed truncate tip dorsally deeply channelled, II cymbiform acuminate or mucronate, IV

cleft to below the middle, awn very short inserted in the cleft. ? *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vi. (1891) 198. Spodiopogon petiolaris, *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1833) 301. S. Lehmanni, *Griseb. in Goetting. Nachr.* (1868) 91. Pollinia Lehmanni, *Wight & Arn. ex Nees Pl. Meyer*, 186; *Duthie Grass. N.W. Ind.* 16. Andropogon petiolaris, *Steud. Syn. Gram.* 398. ? A. petiolatus, *Dalz. & Gibs. Bomb. Fl.* 303.—*Wall. Cat.* 8807 A.

SUBTROPICAL HIMALAYA, alt. 5–8000 ft., from Garwhal to Nepal. KHASIA HILLS, alt. 4–5000 ft. ? The CONCAN, *Dalzell, Lisboa.* BURMA; Karen Hills, *Kurz.*

Stem 2–3 ft., simple or branched, pubescent below the spikes; nodes pubescent. *Leaves* 8–12 by ¾–1¼ in., setaceously acuminate, more or less hairy, margins scabrid; sheath glabrous or margins ciliate; ligule stiff, oblong, truncate. *Spikes* 8–20, ½–1½ in., simple or divided, rachis glabrous, axils bearded; joints and pedicels flattened, subtrigonous, about as long as the spikelets, shortly ciliate. *Spikelets* ⅙–⅕ in., oblong-lanceolate, pale greenish; callus minute, shortly bearded; gl. I chartaceous, 6–8-nerved to the tip, margins rather broadly inflexed from base to tip; keels scabridly ciliate; II chartaceous, keel scabrid, 3-nerved; III = I, oblong, obtuse, hyaline, ciliate, 3-nerved, paleate, male, palea oblong-lanceolate 2-nerved ciliate; IV = ½ III, glabrous, 3-nerved, lobes acute, awn ¼–⅓ in.; palea = the gl., lanceolate, 2-nerved, glabrous. *Pedicelled spikelet* like the sessile, but gl. I hardly channelled; III epaleate; IV male.—As Hackel remarks, this has the habit of a *Pollinia* sect. *Leptatherum* (where I should have been disposed to place it) with the spikelets more of an *Ischæmum.* I have seen no Concan specimen.

27. **I. robustum,** *Hook. f.*; tall, stout, leaves long narrow coriaceous softly tomentose on both surfaces, spikes few racemed strict erect, joints very stout obliquely truncate lower minutely puberulous, sessile spikelets ⅙–¼ in. ovate- or oblong-lanceolate acute coriaceous awnless dorsally flat quite glabrous with 6–9 broad low nerves, keels scabrid above the middle, II coriaceous 7–9-nerved, III 3-nerved paleate male, IV oblong apiculate awnless.

N.W. HIMALAYA; "Pauni, in Bursahir, alt. 7000 ft.," *Brandis* (*Herb. Calcutt.*).

Stem several feet high from a hard rootstock, hard, solid, nearly as thick as a goose-quill, naked below. *Leaves* 12–18 by ⅛–⅙ in., narrowed from the base to the long acuminate tip, sides incurved scaberulous, midrib very stout; sheath long, finely pubescent; ligule a brush of long hairs. *Spikes* 4–5 in., lower stipitate; peduncle stout, glabrous; joints ⅓ shorter than the spikelets, dorsally rounded, ventrally deeply concave. *Sessile spikelets* quite glabrous, appressed to the rachis, upper in the spike smaller than the lower; callus very short, stout; gl. I sometimes channelled in the middle, very variable in the number and position of the rib-like nerves, tip minutely toothed, margins narrowly incurved; II as long as I, eciliate; III shorter, male; palea, ovate-lanceolate, 2-nerved, eciliate; IV as long as III, rigidly membranous, 3-nerved; palea nearly as long, 2-nerved, both eciliate. *Pedicelled spikelet* ⅓ smaller than the sessile; gl. I oblong-lanceolate, acuminate, other gls. and palea as in the sessile, but both flg.—Very unlike any other N. Indian species.

DOUBTFUL SPECIES.

I. COROLLATUM, *Nees ex Steud. Syn. Gram.* 369; *Duthie Grass. N.W. Ind.* 18; *Hack. Monogr. Androp.* 252. Andropogon corollatus, *Steud. l.c.*—Mussoorie, *Royle.*

I. HUGELII, *Hack. Monogr. Androp.* 252; annual, glabrous, decumbent and branched below, leaves 1–12 by ¼ in. flat flaccid, upper sessile cordate-lanceolate, lower shortly petioled, spike solitary 1½-2 in. rather stout, joints clavate dorsally convex, gl. I of sessile spikelets oblong obtuse coriaceous below with often interrupted ridges about the middle glabrous or dorsally ciliate, margins narrowly inflexed scabrid, II ovate deeply keeled, III oblong hyaline glabrous paleate, IV linear-lanceolate acute 1-nerved awnless glabrous, palea as long as the gl. *Pedicelled spikelet* awnless, pedicel very short; gl. I linear-lanceolate, flat, acuminate many-nerved.—The Panjab, at Busahir, *Huegel.*—Hackel describes this as very like *I. semisagittatum*, and makes of it a subgenus of *Ischæmum*, characterized by the solitary spike, stout joints, and awnless spikelets, closely connecting *Ischæmum* with *Rottboellieæ.*

I. LONGISPICATUM, *Munro ex Duthie Grass. N.W. Ind.* 18, name only.

38. **EREMOCHLOA,** *Buse.*

Perennial grasses. *Leaves* more or less equitant, rigid. *Spikelets* 1-fld., flat, secund, solitary, sessile at each internode of a terminal narrow compressed spike, with a rudimentary pedicelled. *Glumes* 4, I nearly flat, oblong, smooth, coriaceous, not awned, margins pectinate; II ovate-lanceolate, acuminate, chartaceous, 3-nerved; III hyaline, oblong, obtuse, paleate, male; IV smaller, hyaline, oblong, obtuse, 1-nerved, fem. or bisexual; palea oblong-lanceolate. *Lodicules* obliquely truncate. *Stamens* 3, anthers long. *Stigmas* short, feathery.—Species 8, E. Asia and Australia.

1. **E. muricata,** *Hack. Monogr. Androp.* 262; gl. I broadly ovate-oblong with 2 fan-shaped terminal wings. Ægilops ciliaris, *Koen. in Neue Schrift. Ges. Nat. Berl.* iv. (1810) 210; *Roem. & Sch. Syst.* ii. 772; *Griff. Notul.* iii. 110, *Ic. Pl. Asiat.* t. 158 (*excl.* 4 *upper left-hand figs.*). Æ. muricata, *Retz. Obs.* ii. 27. Ischæmum pectinatum, *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1833) 296; *Wall. Cat.* n. 8847; *Thwaites Enum. Pl. Zeyl.* 436; *Trim. Cat. Ceyl. Pl.* 107. I. ciliare, *Nees in Herb. Wight.* n. 1717 (*not of Wight Cat.*). Andropogon pectinatus, *Steud. Syn. Gram.* 369. Rottboellia muricata, *Retz. l. c.* iii. 12.

SOUTH DECCAN PENINSULA, *Koenig*, &c. CEYLON; Trincomalee, *Glenie.*—DISTRIB. Australia.

Quite glabrous. *Stem* 6–18 in., compressed. *Leaves* 3–6 by $\frac{1}{6}$–$\frac{1}{4}$ in., tips rounded apiculate. *Spike* 2–5 in., linear; rachis glabrous, brittle, not excavated. *Spikelets* $\frac{1}{6}$ in.; gl. I nearly orbicular, dorsally slightly convex, many-nerved, wings crenate; spines very many, upcurved, nearly as long as the gl. is broad. *Pedicelled spikelet* a single lanceolate acuminate coriaceous nerved gl. with thin inflexed margins.

2. **E. bimaculata,** *Hack. Monogr. Androp.* 265; gl. I elliptic subacute with 2 small low rounded terminal wings, spines shorter than the gl. is broad. Ischæmum pectinatum, *Benth. Fl. Austral.* vii. 521.

UPPER BURMA; near the Serpentine Mines, *Griffith.*—DISTRIB. Australia.

Habit, &c. of *E. muricata*, but leaves much narrower, narrowed at the obtuse tip; spikes more slender; spikelets much narrower, with fewer nerves and shorter spines, callus puberulous.

3. **E. zeylanica,** *Hack. Monogr. Androp.* 263; gl. I elliptic obscurely winged at the subacute tip, spines longer than the gl. is broad. *Trim. Cat. Ceyl. Pl.* 107. Ischæmum pectinatum, *Wight Cat.* n. 1717. I. falcatum, *Thw. Enum. Pl. Zeyl.* 436.

CEYLON, *Walker*, *Thwaites* (C.P. 3327). ? DECCAN PENINSULA, *Wight.*

Habit, size of spikelets, &c. as in *bimaculata*, of which it is probably only a variety, differing chiefly in the long spines of gl. I and glabrous callus.

4. **E. leersioides,** *Hack. Monogr. Androp.* 264; gl. I narrowly oblong acute, spines suberect longer than the gl. is broad. Ischæmum leersioides, *Munro in Proc. Amer. Acad.* iv. (1864-5) 363; *Benth. Fl. Hongk.* 425.

PEGU, *Kurz.*—DISTRIB. China, Tonkin.

Very near *E. zeylanica*, but gl. I is smaller and narrower with the long spines of *E. muricata.*

5. **E. Helferi,** *Munro ex Hack. Monogr. Androp.* 266; gl. I broadly ovate subacute, spines longer than the gl. is broad, upper spikelet a scabrid pedicelled bristle. E. ciliatifolia, *Hack. l.* c.

TENASSERIM, *Griffith, Helfer.*

Leaves 4–6 by ¼–⅓ in. (broader than in the other species), flat, ciliate, tip rounded. *Spike* 1–1½ in. *Spikelets* ⅛ in.; gl. I 5-nerved, nerves anastomosing above.

39. **POGONATHERUM,** *Beauv.*

Delicate annual or perennial grasses with capillary peduncles. *Leaves* erect. *Spikelets* 1–2-fld., binate (usually a sessile bisexual and pedicelled fem.) imbricate on the fragile rachis of a solitary terminal capillary spike, 2-awned; awns capillary, often interlaced. *Glumes* 4, membranous; I oblong, concave, tip truncate or rounded, long ciliate; II as long as I or rather longer, tip acute or 2-toothed, awn terminal; III (in the upper spikelet 0) hyaline, paleate, male; IV hyaline, narrow, 2-fid, long-awned, palea oblong glabrous. *Lodicules* 0. *Stamens* 1 or 2, anthers long. *Stigmas* slender. *Grain* oblong, free.

The following three species are probably forms of one, being united by many intermediates; they are however for the most part readily distinguishable in India.

1. **P. saccharoideum,** *Beauv. Agrost.* 56, t. 11, f. 7; spikelets 1/10–⅛ in., gl. I truncate retuse or tip rounded, II ciliate above the middle, stamens 2 rarely 1. *Thw. Enum. Pl. Zeyl.* 365; *Trim. Cat. Ceyl. Pl.* 107; *Duthie Grass. N.W. Ind.* 16, *Fodd. Grass. N. Ind.* 27. P. saccharoideum, *α.* genuinum, *Hack. Monogr. Androp.* 193. P. polystachyum, *Roem. & Sch. Syst.* ii. 497; *Wight Cat.* n. 1679; *Wall. Cat.* n. 8844. Pollinia polystachya, *Spreng. Syst.* i. 288; *Kunth Revis. Gram.* 493, t. 162. Perotis polystachya, *Willd. Sp. Pl.* i. 324. Saccharum paniceum, *Lamk. Encycl.* i. 595, *Illust.* t. 40, f. 31.

Throughout the hilly parts of India, in dry places, from the PANJAB eastward to BHOTAN, MANIPUR and BURMA, ascending the Himalaya to 4000 ft., and southward to CENTRAL INDIA and CEYLON.—DISTRIB. China, Malaya.

Stem 6–18 in. usually densely tufted, nodes glabrous or bearded. *Leaves* 1–3 in. *Spikes* ½–1 in. *Hairs of callus* shorter than the spikelet.

2. **P. crinitum,** *Trin. Fund. Agrost.* 166; spikelets 1/14–1/12 in., gl. I truncate, II glabrous or nearly so, stamens 1 rarely 2. *Kunth Enum. Pl.* i. 478, *Suppl.* 380, *Aitchis. Cat. Panjab. Pl.* 173, *Franch. & Sav. Enum. Pl. Jap.* ii. 189 (*excl. cit. Beauv.*). P. saccharoideum, *var.* β. monandrum, *Hack. Monogr. Androp.* 193. P. polystachyum, *Kunth Revis. Gram.* 493 (*in part*) t. 161. P. refractum, *Nees in Hook. & Arn. Bot. Beech. Voy.* 239; *in Pl. Meyen.* 182. Pollinia monandra, *Spreng. Syst.* i. 288. Pogonopsis tenera, *Presl Rel. Hænk.* i. 133, t. 46. Homoplitis crinita, *Trin. Fund. Agrost.* 166. Ischæmum crinitum, *Trin. in Mem. Acad. Petersb. Ser.* vi. ii. (1833) 298. Andropogon crinitus, *Thunb. Fl. Jap.* 40, t. 7. A. monandrus, *Roxb. Fl. Ind.* i. 260; *Steud. l. c.* 368.—Pogonatherum, *Griff. Notul.* iii. 81, *Ic. Pl. Asiat.* t. 145, f. 2.

Throughout INDIA, extending to the Malay Peninsula, usually at lower elevations and in hotter places than *P. saccharoideum.*—DISTRIB. Affghan, China, Malaya, N. Hebrides.

A different looking plant from the common form of *P. saccharoideum*, with paler more flexuous squarrose awns, much smaller spikelets, and the hairs of the callus longer than the callus, but intermediates occur, and I could have followed Hackel in uniting them had he included the following.

3. **P. rufo-barbatum,** *Griff. Notul.* iii. 81, *Ic. Pl. Asiat.* t. 145, f. 11; spikelets $\frac{1}{6}$–$\frac{1}{4}$ in., gl. I broadly 2-lobed. III villous above the middle, IV and its palea ciliate, stamens 2. *Hack. Monogr. Androp.* 193. P. majus, *Griseb. in Goett. Nachr.* (1868) 92.

KHASIA HILLS; by streams, alt. 3–5000 ft., *Griffith*, &c.

Stem 10–24 in.; nodes glabrous. *Leaves* 2–4 in., sometimes $\frac{1}{4}$ in. broad. *Spikes* 1–$2\frac{1}{2}$ in.; hairs of callus shorter than the spikelet; gl. I, 2-lobed but hardly 2-auricled (as described by Hackel).—Only, I think, a large form of *saccharoideum* growing in wet places.

40. **APOCOPIS,** *Nees.*

Annual or perennial grasses. *Leaves* short. *Spikelets* 2-fld. (lower fl. bisexual, upper fem.) solitary or the upper reduced to a pedicel, distichously imbricate on solitary or digitate articulate spikes, dorsally compressed. *Glumes* 4, I broad, cuneiform, coriaceous, many-nerved, tip rounded ciliate; II thinner, truncate, 2-keeled; III narrow, hyaline, paleate; IV hyaline, entire or 2-fid, awned or reduced to an awn dilated at the base; palea very short, convolute, truncate, tip ciliate, or 0. *Lodicules* 0. *Stamens* 2–3. *Styles* very short, stigmas long. *Grain* terete, free.—Species 3–4, Eastern Asiatic.

1. **A. Royleanus,** *Nees in Proc. Linn. Soc.* i. (1894), *et in Ann. & Mag. Nat. Hist.* vii. (1841) 220; perennial, gl. IV oblong 2-fid, awn short or 0. *Hack. Monogr. Androp.* 257; *Duthie Grass. N.W. Ind.* 16. Ischæmum paleaceum, *Trin. in Mem. Acad. Petersb. Ser.* 6, ii. (1833) 293; *Sp. Gram. Ic.* t. 333. Andropogon paleaceus & himalayensis, *Steud. Syn. Gram.* i. 376, 377. Ischæmum denticulatum, *Herb. Ham. ex Wall. Cat.* n. 8857.—*Wall. Cat.* n. 8843.

SUBTROPICAL HIMALAYA; alt. 3–4000 ft., from Kumaon to Bhotan. KHASIA HILLS, alt. 4000 ft. MUNNEPORE, alt. 4–5000 ft., *Watt.*—DISTRIB. Borneo.

Stem erect, 10–24 in., usually simple. *Leaves* 2–4 in., narrowly lanceolate, acuminate, and sheaths glabrous or softly hairy. *Peduncle* long, slender; spikes 1–2, rarely 3, erect, 1–$1\frac{1}{2}$ in.; rachis rusty-villous, brittle. *Spikelets* about $\frac{1}{7}$ in., much longer than the joints; gl. I truncate, dark red-brown with a broad yellow tip; IV awn very slender, included or if exserted not twice the length of the spikelet.

2. **A. Wightii,** *Nees ex Steud. Syn. Gram.* 377; annual, gl. IV linear entire or 2-dentate, awn long. *Wight Cat.* n. 2352; *Hack. Monogr. Androp.* 258; *Thwaites Enum. Pl. Zeyl.* 365; A. Wrightii, *Munro in Proc. Am. Acad.* iv. 363, *et in Benth. Fl. Hongk.* 421. A. Beckettii, *Thw. ex Trim. Cat. Zeyl. Pl.* 107. Amblyachyrum mangalorense, *Hochst. ex Hohenack. Pl. Ind. Or.* n. 231 & *in Flora*, xxxix. (1856) 26.

BEHAR, CENTRAL INDIA, throughout the DECCAN PENINSULA, BURMA, and CEYLON.

Stem tall, erect like *A. Royleanus*, or low and densely tufted. *Leaves* 1–3 in., glabrous or hairy. *Spikes* $\frac{1}{2}$–$1\frac{1}{2}$ in., slender or stout. *Spikelets* $\frac{1}{8}$–$\frac{1}{5}$ in.; gl. I yellow with red-brown tips, or dark brown with yellowish tips, glabrous or clothed with red-brown shiny hairs, tips retuse ciliate with minute or long hairs; II 3-nerved or nerveless, sides sharply inflected, angles smooth or scabrid; III nearly = I, tip ciliolate; IV very narrowly oblong or almost linear, awn two to six times as long as the spikelet; palea very short and convolute.—Very variable, and doubtfully separable from *Royleanus* which is stouter with stouter spikes. Wight's original specimen (Cat. n. 2352) is 18–20 in. high, very slender, leafy upwards, with slender pale spikes, and glabrous gl. I; it strongly resembles some specimens of *Royleanus*, and is I suspect perennial. This and a var. *zeylanicus* (*Wightii*, Thw.) with more hairy, darker gl. I, forms Hackel's Subsp. *genuinus*. His Subsp. *mangalurensis* includes short densely tufted states, with shorter red-brown densely hairy and long-ciliate gl. I; it is the common Deccan form, and includes Thwaites' *A. Beckettii*. The difference between the narrow gl. IV of all states of *A. Wightii*, and the much broader hyaline one of *A. Royleanus*, is one of degree only.

Var. *vaginata*; spikes more or less included in the long spathiform sheaths of the uppermost leaves. A. vaginatus, *Hack. in Œstr. Bot. Zeitschr.* xli. (1891) 8.—Hazaribagh, *Clarke.*

3. **A. pallida,** *Hook. f.*; annual, gl. IV reduced to a slender awn.

NILGHIRI HILLS, *Foulkes.*

Stems slender, stiff, widely creeping and rooting, with short geniculately ascending flg. branches, 2–6 in. high. *Leaves* 1–2 in., linear, acuminate, smooth, sparsely hairy, margins thickened, subscaberulous; sheath open; ligule 0. *Spikes* $\frac{1}{2}$–1 in. $\frac{1}{8}$ in. diam., very pale; rachis slender, ciliate. *Spikelets* $\frac{1}{10}$ in.; gl. I broadly cuneiform, ciliate with long hairs, 7–9-nerved; II oblong, obtuse, 3-nerved, lateral nerves submarginal, keels ciliate; III oblong or lanceolate, glabrous, nerveless; IV awn $\frac{1}{8}$–1 in., brown, not dilated at the base; palea 0. *Pedicelled spikelets*, gl. I spathulate, truncate, villous, sides recurved; II as in the sessile spikelets.

41. ARTHRAXON, *Beauv.*

Annual or perennial slender grasses. *Leaves* short, broad, deeply cordate. *Spikelets* 1-fld., solitary or with a rudimentary pedicelled second, sessile on binate digitate or fascicled jointed spikes. *Glumes* 4, I largest, usually strongly tubercled, not embracing the inner; II keeled, 3-nerved; III small, hyaline; IV shortest, lanceolate, keeled, hyaline, with usually a long dorsal or basal awn; palea minute or 0. *Lodicules* subquadrate. *Stamens* 2–3. *Styles* short or 0, stigmas long, laterally exserted. *Grain* narrowly linear.—Species 8, tropics of Old World.

Sect. I. PLEUROPLITIS. Joints of rachis of spike rectangularly truncate.

* *Stamens* 3, *anthers large, nearly as long as gl. IV.*

1. **A. lanceolatus,** *Hochst. in Flora*, xxxix. (1856) 188; spikelets linear-lanceolate, gl. I linear dorsally convex smooth margins hyaline inflexed, marginal nerves armed with very strong curved teeth. *Hack. Monogr. Androp.* 347; *Duthie Grass. N.W. Ind.* 17. A. echinatus & serrulatus, *Hochst. l.c.* Batratherum echinatum, *Nees in Edinb. Phil. Journ.* xviii. (1835) 181; *Wall. Cat.* n. 8829; *Aitchis. Cat. Panjab Pl.* 174. B. lanceolatum, *Nees l.c.*; *Wight Cat.* n. 1684. B. serrulatum, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 458. Andropogon echinatus, *Herb. Heyne ex Wall. Cat.* n. 8829; *Steud. Nom. Ed.* II. i. 191; *Edgew. in Journ. As. Soc.*

Beng. xxi. (1853) 182; *Duthie Grass. N.W. Ind.* 16. A. lanceolatus, *Roxb. Fl. Ind.* i. 257; *Kunth Enum. Pl.* i. 498. A. prionodes, *Maxim. in Bull. Soc. Nat. Mosc.* liv. (1879) 68 (*non Steud.*). A. serrulatus, *Link Enum. Hort. Berol.* i. 241; *A. Rich l. c.* Thelepogon elegans, *Roth Nov. Sp.* 62 (*char. fals*), *ex Roem. & Sch. Syst.* ii. 788; *Wight Cat.* n. 1684.—Batratherum, *Wall. Cat.* n. 8830.

WESTERN HIMALAYA, alt. 5–8000 ft. from Kashmir to Nepal. Plains of the PANJAB and RAJPOOTANA. BEHAR, on Parusnath, alt. 4000 ft., *Clarke.* COROMANDEL, *Roxburgh.* SIND, *Stocks.*—DISTRIB. Abyssinia, Tonkin, China.

A tall much-branched suberect or subscandent grass 1–3 ft. high with rigid stems thicker than a crow-quill. *Leaves* very variable, from broadly ovate and ½–3 in. by ¼–1½ in., to narrowly lanceolate and 1–4 by ⅙–½ in., caudate-acuminate, flaccid or rigid, glabrous or hairy, margins serrulate or ciliate with stiff hairs, nerves obscure; ligule rounded. *Spikes* few or many, ½–2 in., rachis sparsely hairy, joints about half as long as the spikelet, margins ciliate. *Spikelets* ⅙–¼ in., very narrow; gl. I acute, tip hyaline 5–7-nerved, dorsally smooth or muriculate; II lanceolate, 3-nerved; III shorter, linear-oblong, acute; IV hyaline, awn about 1 in. long. *Pedicelled spikelets* linear-lanceolate, keels hispidulous; anthers perfect.—Hackel has 5 varieties and subvarieties of this species, but I fail to limit them after studying copious materials.

2. **A. rudis,** *Hochst. in Flora,* xxxix. (1856) 188; spikes few, spikelets ovoid, gl. I ovate acute convex 7-nerved, nerves above armed with a few irregular spinescent tubercles, margins hyaline narrowly incurved IV paleate. *Hack. Monogr. Androp.* 348. Andropogon rudis, *Steud. Syn. Gram.* 383; *Thwaites Enum. Pl. Zeyl.* 368; *Trim. Cat. Ceyl. Pl.* 107. A. castratus, *Griff. Notul.* iii. 89. Batratherum rude, *Nees ex Steud. l. c.*—Arthraxon, *Wall. Cat.* n. 8834, 8837.

UPPER ASSAM; Suddiya, *Griffith.* SILHET, *de Silva.* CEYLON; in the Central Province, *Thwaites* (C.P. 866).

Stem 1–2 ft., erect from a geniculate branched rooting (blood-red, *Griff.*) base, rigid, as thick as a crow-quill or less. *Leaves* 2–4 in., lanceolate, acuminate, glabrous or sparsely hairy, margins strongly ciliate. *Peduncle* long, slender, naked. *Spikes* 1, 2, or few, ½–1 in., peduncled; peduncle and rachis rather stout smooth, with sometimes an empty glume. *Spikelets* ⅙ in. (red-brown, *Griff.*), coriaceous; gl. I 9-nerved; II 3-nerved, acute; III hyaline, oblong, ciliate, 1-nerved; IV lanceolate, ciliate, awn inserted below the middle, about twice as long as gl. II, palea linear-oblong, ciliate.—The only species in which I have seen a palea to gl. IV.

3. **A. breviaristatus,** *Hack. Monogr. Androp.* 350; spikes many, spikelets ovate-lanceolate, gl. I oblong-lanceolate subacute convex nerves 7 pair tubercled nearly to the base, II acute keel ciliate margins with deflexed cilia, awn short. Batratherum khasianum, *Munro mss.* B. echinatum, *Herb. Ind. Or. Hf. & T.* (*in part*).

KHASIA HILLS, alt. 5000 ft., *Griffith,* &c.

Stems 2–4 ft., geniculately branched below, about as thick as a dove's quill. *Leaves* 1–2½ in., ovate or ovate-lanceolate, finely acuminate and sheaths glabrous or hairy. *Peduncle* long, usually naked, slender. *Spikes* 10–20; 1–3 in.; rachis and pedicels nearly glabrous. *Spikelets* ⅙–⅕ in., purplish; gl. I variable in the number and size of tubercles on the nerves; IV not much shorter than II, awn subbasal, shortly exserted. *Anthers* very large (sometimes 2 only?)—Resembles a very large *A. ciliaris.*

4. **A. submuticus,** *Hochst. in Flora,* xxxix. (1856) 188; spikes few short pale, spikelets all sessile very small linear-oblong terete, gl. I

7-nerved, nerves more or less muriculate; II acute keel ciliate, IV with a very short included basal awn or 0. A. ciliaris, *Subsp.* 6, submuticus, *Hack. Monogr. Androp.* 356. Batratherum submuticum, *Nees ex Steud. Syn. Gram.* 382; *Duthie Grass. N.W. Ind.* 17. Andropogon submuticus. *Steud. l. c.*—Arthraxon, *Wall. Cat.* n. 8835 B (*in part*) & 8836.

WESTERN HIMALAYA; from Garwhal to Central Nepal, alt. 2–6000 ft., *Wallich*, &c. TAVOY, *Gomez.*—DISTRIB. China, Loochoo Islds.

Annual. *Stems* 6 in.–3 ft., slender, much-branched and rooting below, as thick as a sparrow's quill. *Leaves* ½–1½ in., broadly ovate-cordate, acuminate, and sheaths glabrous or hairy, margins strongly ciliate. *Peduncle* filiform, usually long and naked. *Spikes* 3–5, ½–1 in. long, very slender; rachis quite glabrous, flexuous. *Spikelets* ⅛ in., pale, all sessile (male?). *Stamens* as long as gl. IV.—A puzzling plant, and possibly the male of an unrecognized form of *ciliaris* from which species it differs in the 3 stamens as long as gl. IV, as well as in the minute flowers, and usually the want of an awn, though a very short one is sometimes present. One very long specimen (Herb. J. S. Lace) has besides the terminal naked peduncle, very short sheathed lateral ones.

5. **A. spathaceus,** *Hook. f.*; slender, panicles (always?) in long spathiform narrow sheaths, spikes few, spikelets oblong-lanceolate, gl. I of sessile spikelet oblong-lanceolate 5–7-nerved, nerves covered throughout their length with a row of acute tubercles, awn of gl. IV dorsal.—Batratherum, *Herb. Wight* n. 3257.

DECCAN PENINSULA; Gunde Cottah Hill fort, Cuddapah, *Wight Herb.* 357.

Stems 1–2 ft., not thicker than a sparrow's quill, branched. *Leaves* 1–2 in., oblong-lanceolate, acuminate, flaccid, ciliate and sheaths sparsely hairy; floral sheaths terminal, erect, 1½–2 in. by ⅙–¼ broad, membranous, green, usually overtopping the panicle. *Spikes* ⅓–½ in., very pale; pedicels and joints sparsely hairy. *Upper spikelets* male; gl. I quite smooth, striate; II hyaline; IV awnless. *Stamens* more than half as long as gl. IV., linear.—A well-marked species by the spathe and tubercles of gl. I. A specimen from Belgaum (*Ritchie*, *n.* 796 in Herb. Munro) closely resembles this in the tubercled gl. I; it has only 2 very small imperfect anthers and no pedicelled spikelets.

6. **A. inermis,** *Hook. f.*; spikelets solitary (pedicelled 0) oblong-lanceolate, gl. I dorsally convex obtuse strongly 7-9-nerved unarmed margins (not incurved) and nerves scabrid.

The CONCAN, *Woodrow.*

Stems very slender, much geniculately branched. *Leaves* 1–2 in., ovate, broadly amplexicaul, caudate-acuminate, tips setaceous, glabrous or puberulous above, ciliate with long hairs beneath, margins smooth; sheath hairy. *Spikes* few, short, green, irregularly sparingly divided; peduncle slender, naked, branches ½ in., very slender, ciliolate. *Spikelets* ⅒ in., all sessile, rather distant; gls. thin, I strongly nerved; II as long as I, obovate-oblong when spread out, obtuse, emarginate, apiculate, 3-nerved, hardly keeled, nearly smooth; III 0 (or palea of IV) shorter than II, lanceolate; awn basal, twice as long as the spikelet; palea oblong, obtuse, glabrous. *Anthers* very large.

** *Stamens* 2 *or* 3; *anthers not half the length of gl. IV.*

7. **A. ciliaris,** *Beauv. Agrost.* 3, t. xi. f. b; peduncles glabrous below the spikes, spikes many ½–3 in. subflexuous, joints = ⅔ the spikelets in length or longer glabrous or shortly ciliate, gl. I entire at the tip, nerves scabrid or echinate above the middle, II acute or acuminate. *Hack. Monogr. Androp.* 354; *Benth. Fl. Austral.* vii. 524 (*excl. syn.*).

Hance in Journ. Linn. Soc. xiii. (173) 134. Andropogon Retzii & incertus, *Steud. Syn. Gram.* 375.—Arthraxon, *Wall. Cat.* n. 8833. 8835 A. (B. *in part*) 8836.

Hilly districts of INDIA from Kashmir eastwards to Burma, ascending the Himalaya to 5500 ft., and southward to the Nilghiri Hills and CEYLON.

Stems tall or short, weak, rarely as thick as a crow-quill, tufted and branched from the base, or with long creeping stems and ascending leafy branches. *Leaves* 1–3 in., ovate to lanceolate, glabrous or laxly hairy, margins ciliate; sheath with ciliate margins. *Spikes* few or many, on long naked or spathaceously sheathed glabrous peduncles, pale green or purplish. *Spikelets* $\frac{1}{8}$–$\frac{1}{5}$ in., lanceolate or linear-lanceolate, callus naked or shortly bearded; gl. I scaberulous, 7–10-nerved; II obscurely 3-nerved; III much shorter, oblong acute; IV usually awned. *Stamens* variable in length never = $\frac{1}{2}$ gl. IV.—I give below Hackel's grouping of the two principal forms of this protean plant and their synonymy. For his elaborate subdivision of these into 4 subspecies and 9 varieties I must refer to his work. These are founded on characters of unequal value, and subject to diverse limitations. After a long study of the mass of materials at Kew I recognize the following widely distributed leading Indian forms:—1, *A. violaceus*; rather robust, spikes 6–20 1–2 in. long, spikelets $\frac{1}{5}$ in. more or less purple, awns twice as long as the spikelet or shorter; 2, *nudus*, usually tall and widely straggling, spikes many 1–2 in. very slender rachis capillary, sparsely hairy, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. narrow very pale, stamens as often 3 as 2; 3, *plumbeus*, stems shortly straggling much branched, leaves small, spikes 2–3 rarely more $\frac{1}{2}$-$\frac{3}{4}$ in. long, rachis capillary nearly glabrous, spikelets $\frac{1}{10}$ in. usually purple, approaches nearest to *A. microphyllus*; 4, *muriculatus*; habit of *plumbeus*, but nerves of gl. I echinulate nearly to the base.—N.W. India.

Hackel's two leading groups to which I have added a third:—

a. *Joints of rachis glabrous, or with a few scattered hairs towards the tip.*

A. ciliaris, *Beauv. l. c.* A. gracilis & lasiocoleos, *Hochst. in Flora*, xxxix. (1856) 188, 189. A. japonicus, *Miq. Ann. Mus. Bot. Lugd. Bat.* ii. 288. A. lanceolatus & nudus, *Hochst. in Flora*, xxxix. (1856) 159. A. Langsdorfianus, *Hochst. l. c.*; *Boiss. Fl. Orient.* v. 455. A. nudus, *Benth. ex Clarke in Journ. Linn. Soc.* xxv. (1889) 86. Batratherum nudum, *Nees ex Steud. Syn. Gram.* 383. Pleuroplitis centro-asiatica, *Griseb. in Ledeb. Fl. Ross.* iv. 477. P. Langsdorffiana, *Trin. Fund. Agrost.* 175, t. 16. Lucæa gracilis, *Kunth Revis. Gram.* ii. 489, t. 159, *Enum.* i. 472. L. Langsdorffiana, *Steud. l. c.* 413. Lasiolytrum hirtum, *Steud. in Flora* (1846) 18; *Syn. Gram.* 12. Las. pilosum, *Steud. ex Jord. in Num. Soc. Sc. Nat. Cherb.* v. (1857) 299. Pollinia ciliaris, *Spreng. Syst.* i. 289. Andropogon amplexifolius, *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. 1833, 274. A. lasiocoleos & nudus, *Steud. l. c.* 383. Phalaris hispida, *Thunb. Fl. Jap.* 44. Deyeuxia japonica, *Spreng. l. c.* 254.

b. *Joints of rachis, at least the upper, more or less ciliate.*

A. coloratus, major, Schimperi, Schmidtii & violaceus *Hochst. l. c.* 188. Batratherum plumbeum, *Munro ex Duthie in Atkinson Gazette*, 640. Pleuroplitis ciliata, *Schmidt Beitr. Fl. Cap. Verd. Ins.* 152. P. plumbea & violacea, *Steud. l. c.* 414. P. Quartiniana, *Regel* in *Bull. Acad. Petersb.* v. (1866) 757, *Wight Cat.* n. 1683. P. caucasica, *Rupr. ex Regel in Bull. Acad. Petersb.* x. (1866) 373. Lucæa ciliata, major, plumbea & violacea, *Steud. l. c.* 414. Andropogon Alectoridia, *Steud. l. c.* 383. A. violaceus, *Heyne ex Steud. l. c.* 414. Alectoridia Quartiniana, *A. Rich. Tent. Fl. Abyss.* ii. 448, t. 99.—*Wall. Cat.* n. 8833 A.

c. *Spikes silkily villous, spikelets* $\frac{4}{5}$–$\frac{1}{3}$ *in., gl. I acute entire or minutely 2-toothed, awn* $\frac{1}{2}$ *in. or more.*

A. cuspidatus, *Hochst. in Flora* (1856) 188; *Hack. Monogr. Androp.* 353. A. micans, *Hochst. l. c.* Batratherum micans, *Nees in Ann. & Mag. Nat. Hist.* vii. (1835) 220. Pleuroplitis major, *Regel in Bull. Acad. Petersb.* v. (1866) 750 (*excl. Syn. Lucæa major*). Andropogon cuspidatus, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 456. A. lanceolatus, *Baker Fl. Maurit.* 444 (*non Roxb.*). A. micans, *Steud. Syn. Gram.* 382.—N.W. Himalaya, Nilghiri Hills, Mauritius, Afr. trop.

8. **A. microphyllus,** *Hochst. in Flora,* xxxix. (1856) 188; peduncles puberulous beneath the spikes, rachis of spikes strict, joints = ½ the spikelets in length or shorter ciliate with long hairs, spikelets ⅒–⅛ in., nerves of gl. I scaberulous above the middle tip 2-toothed or 2-aristulate, II acuminate or awned, IV obtusely 2-toothed, awn very slender. *Hack. Monogr. Androp.* 353. A. lancifolius, microphyllus, & minor, *Hochst. in Flora* xxxix. (1856) 188. Batratherum molle, *Nees & Arn. in Mag. Nat. Hist. l. c.* 181; *Wight Cat.* n. 1686; *Aitchis. Cat. Panjab Pl.* 174. B. Schimperi, *Nees ex Hochst. l. c.* 177. Pleuroplitis lancifolia, microphylla & Schimperi, *Regel in Bull. Acad. Petersb.* x. (1866) 747-756. Lucæa Schimperi, *Steud. Syn. Gram.* 414. Andropogon microphyllus, *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1833) 275. A. lancifolius, *Trin. l. c.* 271; *Thw. Enum. Pl. Zeyl.* 368; *Trim. Cat. Ceyl. Pl.* 108. A. minor, *Hochst. l. c.* 188. A. molle, *Duthie Grass. N. W. Ind.* 17. A. muralis, *Herb. Ham. ex Wall. Cat.* n. 8828. A. multicaulis, *Steud. l. c.* 383. Psilopogon Schimperi, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 447. Ps. Figarei, *Figar. Ind. Sem. Hort. Gen.* (1852), *in Ann. Sc. Nat. Ser.* III. xix. (1853) 370. ?Pogonatherum tenue, *Edgew. in Journ. As. Soc. Beng.* (1853) 181. —Batratherum, *Wall. Cat.* n. 8828.

TEMPERATE HIMALAYA, from Kashmir, alt. 4–5000 ft. to Sikkim, alt. 5–11,000 ft.; the KHASIA HILLS and southwd. to the NILGHIRIS. BURMA, *Collett.* CEYLON, *Thwaites.*—DISTRIB. Tonkin, Afr. trop.

Except in the smaller size, hairy peduncles and rachis of the shorter spikes, small spikelets, and toothed tip of gl. I, there is little to distinguish this from some of the states of *A. ciliaris.* Hackel indeed says that these are very closely allied.

Sect. II. TRICHATHERUM, *Hack. Joints* of rachis of spike obliquely truncate. *Awn* 10 in. long, capillary, flexuous.

9. **A. jubatus,** *Hack. Monogr. Androp.* 358.

The CONCAN? *Stocks.*

Annual, decumbent, glabrous; stems slender, ascending, branching, 6–12 in. long. *Leaves* 1–2 by ¼–⅓ in., lanceolate from a convolute amplexicaul base, acuminate, flat, flaccid, pubescent or villous; sheaths lax, pubescent, upper spathiform leafless; ligule short. *Floral spathes* 1½–2½ in., linear-lanceolate, membranous, green, enclosing the spikes, pubescent. *Spikes* binate on a common peduncle, a subsessile and a pedicelled, pedicel slender pubescent, fragile; joints about 4, half as long as the spikelet, and shorter pedicels of upper spikelet clavate, compressed, pectinately ciliate. *Spikelets* binate, a sessile and pedicelled at each joint, and a terminal male. *Sessile spikelets* ⅓ in., membranous, linear-lanceolate, 2-nerved, deeply inflexed in the middle line, tip 2-mucronate, margins hyaline; II as long, linear-lanceolate, laterally compressed, 1-nerved, keel scabrid; III shorter, linear, nerveless, glabrous; IV = ½ III, lanceolate acute, glabrous, with the immensely long awn attached to its base, palea 0. *Pedicelled spikelets* about ⅕ in., awnless.

UNDETERMINABLE SPECIES.

BATRATHERUM, *Wall. Cat.* 8827 (Andropogon minutissimus, *Herb. Heyne*) is a dwarf or very immature state and unrecognizable.

41. **ISCHNOCHLOA,** *Hook. f.*

(Genus not in the clavis, p. 4.)

A small, slender, straggling, flaccid, leafy annual. *Leaves* elliptic-lanceolate, acute at both ends. *Spikes* solitary, simple, shortly exserted from the uppermost leaf-sheaths; rachis very slender, linear, flattened, with thickened margins, inarticulate. *Spikelets* 1-fld., minute, binate, a sessile and a pedicelled, lanceolate, both awned and bisexual; callus minute, ciliate. *Glumes* 3 (III absent) I linear-oblong, subcoriaceous, 5–6-nerved, dorsally flattened, tip broadly hyaline truncate irregularly 2-toothed, margins incurved, keels ciliate; II oblong, keeled, obtuse or truncate, 3-nerved, ciliate towards the tip; IV much shorter, very narrow, cleft to the middle, lobes subulate; awn in the cleft, capillary, geniculate, palea 0. *Lodicules* cuneate. *Stamens* 3, anthers oblong. *Styles* short, free. *Grain* subfusiform, terete, grooved one side.

A remarkable genus, with the habit of *Arthraxon* (closely resembling *A. microphyllus*), next which it may be provisionally placed, but not nearly related to it, differing in the inarticulate flat rachis of the simple spike, bisexual awned pedicelled spikelets, and absence of gl. III.

I. Falconeri, *Hook. f. in Hook. Ic. Pl. t.* 2466.

NORTH WESTERN HIMALAYA; growing amongst moss, *Falconer.*

Stems 6–8 in., very slender, sparingly branched, leafy to the tips, filiform; internodes concealed by the leaf-sheaths. *Leaves* ½–¾ in., flat, acute or acuminate; sheath deeply furrowed, glabrous; ligule a few hairs. *Spikes* ½–1 in., very slender, green, peduncle capillary as long as the leaf-sheath; rachis exactly linear, flexuous, quite glabrous, not disarticulating at the transverse glabrous nodes. *Spikelets* $\frac{1}{10}$ in. long, rather longer and broader than the internodes; gl. I with the 2 lateral (carinal) nerves only reaching the tip; II with a stout median nerve and 2 very slender lateral ones anastomosing with it below the tip.

42. THELEPOGON, *Roth.*

A coarse perennial grass. *Leaves* lanceolate, base cordate, amplexicaul. *Spikes* few or many, corymbosely fascicled, peduncled, lower whorled, upper distant; rachis flexuous, fragile; joints more or less deeply excavated. *Spikelets* solitary at the joints, with the rigid pedicel only of an upper, ovoid, acute. *Glumes* 4, I thickly coriaceous, convex, beaked, transversely rugose ridged or tubercled; II sunk in the cavity of the joint, rigid, sparingly tubercled, acuminate; III shorter, hyaline, paleate, usually male; IV bisexual, hyaline, deeply bifid, with a long twisted awn in the sinus; palea narrow. *Lodicules* broad. *Anthers* 3, very long. *Styles* free, stigmas short. *Grain* narrowly oblong, free.

T. elegans, *Roth. ex Roem. & Sch. Syst.* ii. 788, *Nov. Pl. Sp.* 62; *Hack. Monogr. Androp.* 267. Andropogon Princeps, *A. Rich. Tent. Fl. Abyss.* ii. 471, t. 102. Rhiniachne Princeps, *Hochst. ex Steud. Syn. Gram.* 360 (*in Syn.*). Jardinea abyssinica, *Steud. Syn. Gram.* 360.

CENTRAL INDIA, the CONCAN and MALABAR.—DISTRIB. Afr. trop.

Stems 6 in. 3 ft., tufted and branching from the base, or woody as thick as a crow-quill below and geniculately branching upward; roots stout, rigid. *Leaves* 3–10 by ⅓–⅔ in., linear, acuminate, rather thin, and sheaths glabrous scabrid or hispid with tubercle-based hairs, margins denticulate; ligule very short. *Spikes* 1–3½ in., peduncle slender, stiff; rachis compressed, much narrower than the spikelets, of upper spikelets tubercled; joints as long as the spikelets, subclavate, scaberulous, top orbicular cupped. *Spikelets* ⅛–⅙ in., yellow or brown; callus annular, bearded; gl. I very thick, hard, beak echinate; II with usually one transverse row of tubercles; III broad, 2-nerved, glabrous; palea narrow, acute, nerveless; IV ovate-lanceolate, 3-nerved, glabrous; lobes lanceolate, 1-nerved; awn=3–4 gl. in length; palea as long as the gl., oblong, acuminate, 2-nerved. *Pedicel* of arrested spikelets flat, scabrid.—Gl. III and its palea would appear to have exchanged their character of nervation. A curious gigantic state? collected by Ritchie at the Kola Nuddi Waterfall (in the Concan?) has the upper spikelets densely softly villous, gls. I and II thin hardly tubercled, the lower spikelets appear to be binate but are very imperfect.

43. **LOPHOPOGON,** *Hack.*

Small perennial densely tufted grasses. *Leaves* very narrow. *Spikes* very short, solitary 2-nate or fascicled on the ends of capillary branches, very fragile; joints very short, slender, tips cupular. *Spikelets* small, homogamous or heterogamous, 1–2-fld., 2–3-nate, one sessile, callus conical villous. *Glumes* 4, I and II chartaceous, I oblong, broadly truncate, irregularly 3–4-toothed, 7-nerved, dorsally convex; II longer than I, lanceolate, narrowed into a straight awn, 3–5-nerved, hispidly villous on the sides, and with tufts of hairs dorsally below the middle; III hyaline, oblong-lanceolate, acute or aristulate, ciliolate, 1-nerved, 1–2-androus or neuter, palea linear 2-nerved; IV nearly as long as III, fem. or bisexual and diandrous, linear-oblong, 2-fid, lobes setiform and margins hispidulous; awn in the cleft, much longer than the gls. tortuous and twisted; palea minute, quadrate, lobulate, 2-nerved. *Lodicules* 0. *Anthers* narrow. *Styles* combined below, stigmas very long.—Species 2, Indian and a 3rd? Australian.

In *L. tridentatus* the lower spikelets sometimes form a whorl at the apex of the peduncle as in *Germainia*. In this species also the upper spikelet is usually male or neuter. Hackel suggests the probability of *Retz's Andropogon incurvatus* (Obs. v. 21 *non Trin.*) from Tranquebar, *Koenig*, being a *Lophopogon*.

1. **L. tridentatus,** *Hack. in Engl. & Prantl. Nat. Pflanzenfam.* ii. II 56, *Monogr. Androp.* 254, t. i. f. 14; stem subsimple, spikes more or less closely sheathed. *Lisboa in Bomb. Journ. Nat. Hist.* vi. (1891) 201; O. Kuntze, *Revis. Gen.* i. 197. Andropogon tridentatus, *Roxb. Fl. Ind.* i. 257; *Steud. Syn. Gram.* 372. Saccharum tridentatum, *Spreng. Syst.* i. 283.—Gen. Nov. *Wall. Cat.* n. 8842.

The Concan and Canara, *Heyne,* &c. Central Provinces, Khaudua, *Duthie.*

Stem 4–6 in. *Leaves* 2–4 in., rigid, 3-nerved; sheath short, upper ventricose; ligule obscure, ciliate. *Heads of spikes* $\frac{1}{3}$–$\frac{1}{2}$ in.; sheaths ovoid, flattened, membranous, caudate-acuminate. *Spikes* $\frac{1}{2}$–1 in. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in., brown when dry; gl. I of lower spikelet dorsally naked, of upper with tufts of long bristles below the middle; II back and margins villous, with a pencil of hairs on each side about the middle.

O. Kuntze, l. c. has two varieties: *α. Wrightii,* Nees mss., with red hairs at the base of gl. I., and *β. Munroi,* with none.

2. **L. Kingii,** *Hook. f.*; stem subcorymbosely branched above, spikes long-peduncled.

Behar; at Monghir, *Herb. Hort. Calcutt.*

Foliage and spikelets nearly as in *L. tridentatus*, but habit very different. The subcorymbose branches of the stem bear subulate leaves and capillary peduncles 1–2 in. long embraced by almost filiform sheaths with acicular tips. *Spikes* solitary or few together, $\frac{1}{2}$ in. long, pale yellow-brown, fragile.—More materials are wanting for a trustworthy description of the inflorescence.

44. **APLUDA,** Linn.

A leafy perennial grass. *Stems* geniculately ascending from a creeping or decumbent base, sometimes scandent, paniculately branched. *Leaves* petioled, flat; sheaths of upper spathiform. *Inflorescence* of very many solitary small simple spikes, terminating the stem and branches, each enclosed in a special membranous peduncled spathe, together forming a leafy panicle. *Spikes* of one linear joint gibbously bulbous at the base, and jointed on the peduncle at the base of the spathe by a minute curved pedicel; rachis (joint) smooth. *Spikelets* 3, a sessile 2-fld. bisexual with a pedicelled imperfect (reduced to a small gl.) at the base of the rachis, and a terminal male or neuter, rarely bisexual; sessile spikelet seated on the bulbous base of the rachis (callus of authors); gls. 4, I chartaceous convolute many-nerved margins not inflexed, II compressed 5–7-nerved dorsally gibbous keeled, III ovate-lanceolate hyaline male paleate, IV much smaller bisexual ovate paleate entire or 2-toothed, awned or not. *Lodicules* 2, cuneate. *Stamens* 3, anthers short. *Styles* free. *Grain* oblong, embryo large.

In the above description I consider what Hackel describes as the pedicel of the upper spikelet to be the rachis of the uninodal spike; and his callus of the sessile spikelet to be a bulbous inflation of the base of the rachis.

A. varia, *Hack. Monogr. Androp.* 196. A. aristata and mutica, *Auct.*—Apluda, *Wall. Cat.* n. 8760, 8761.

Throughout INDIA and BURMA, ascending the Himalaya to 8000 ft. CEYLON, up to 4000 ft.—DISTRIB. E. trop. Asia, Malaya, Australia, Ins. Pacific.

Stem 1–7 ft. or more, solid, as thick as a crow-quill below; branches flexuous; roots wiry. *Leaves* 4–18 in., subbifarious, linear-lanceolate, cuspidately acuminate, base narrowed usually petioled, above and margins scaberulous, glaucous beneath, upper gradually shorter; sheaths glabrous, rarely hairy, upper shorter and dilated into spathes with subulate tips; ligule short, rounded. *Spathes* of the fig. branches about 4 in. long, cymbiform, thin, many-nerved; of the spikes smaller, very variable in length, longer or shorter than their almost capillary peduncles. *Spikes* $\frac{1}{4}$–$\frac{1}{3}$ in., green or pale violet. *Sessile spikelet* $\frac{1}{8}$–$\frac{1}{5}$ in.—The following is Hackel's arrangement of the very unstable Indian varieties of this polymorphous plant. It is especially useful as approximately classifying its intricate synonymy.

Subsp. MUTICA, *Hack.*; gl. IV very rarely awned; I straight glabrous; II dorsally gibbous keel depressed above the gibbosity acute glabrous; panicle usually lax, ultimate fig. branchlets usually half as long as the sheath.—A. mutica, *Linn. Sp. Pl.* 82; *Gærtn. Fruct.* ii. t. 175; *Lamk. Ill.* t. 841, f. 1; *Anderss. in Œfvers. Vet. Akad. Stockh.* (1855) t. 5, f. 6. A. gigantea, *Spreng. Syst.* i. 290. ?A. glauca, *Schreb. Beschr. Græs.* 99. A. geniculata, *Roxb. Fl. Ind.* i. 325. Andropogon glaucus, *Retz. Obs.* v. 20. Calaminea gigantea, *Beauv. Agrost.* 15, t. 23, f. 1.

Var. *humilis*; clusters of spikes distant, spathe of spike $\frac{1}{5}$–$\frac{1}{4}$ in., sessile spikelet $\frac{1}{7}$–$\frac{1}{5}$ in., callus $\frac{1}{40}$ in., gl. I entire, imperfect spikelet hirsute. A. humilis, *Kunth Enum. Pl.* i. 517. A. Cumingii, *Buese ex de Vriese Pl. Reinw.* 105. A. inermis, *Regel in Act. Hort. Petrop.* vii. (1880) 658. A. mucronata, *Steud. Syn. Gram.* 404. Calamina humilis, *Roem. & Schult. Syst.* ii. 810.

Subsp. ARISTATA, *Hack.* gl. IV of sessile spikelet cleft to the middle; I chartaceous; II dorsally less gibbous, keel sometimes scabridly ciliate often 2-mucronate; panicle dense, ultimate fig. branchlets shorter than the spathes, clusters of spikes close or confluent. A. aristata, *Linn.*

Cent. ii. 7; *Schreb. Beschr. Græs.* 93. *Lamk. Ill.* t. 841, f. 1; *Steud. Syn. Gram.* 403; *Roxb. Fl. Ind.* i. 324; *Dalz. & Gibs. Bomb. Fl.* 303; *Thw. Enum. Pl. Zeyl.* 364; *Trim. Cat. Ceyl. Pl.* 108; *Aitchis. Cat. Panjab Pl.* 174; *Duthie Fodd. Grass. N. Ind.* 44, t. 29. A. Gryllus, *Beauv. Agrost.* 133 (*cf. corrigend. in Suppl.*) t. 23, f. 5.

Var. *aristata proper*; spathe rather shorter than its spike, sessile spikelet $\frac{1}{8}$–$\frac{1}{5}$ in., bulbous base $\frac{1}{40}$–$\frac{1}{28}$ in., gl. I glabrous nerves scabrid, terminal spikelet = sessile, pedicelled spikelet minute. A. microstachya, *Nees in Nov. Act. Nat. Cur.* xix. *Suppl.* i. (1843) 194. A. scabra, *Anderss. l. c.* 179. Ischæmum involucratum, *Hb. Russ. in Wall. Cat.* n. 8794 A.

Var. *ciliata*; tall, robust, flg. spathes glabrous or hairy, spathe half as long as its spike, sessile spikelet $\frac{1}{4}$–$\frac{1}{3}$ in., bulbous base $\frac{1}{12}$–$\frac{1}{10}$ in., gl. I and rachis puberulous, spathe glabrous or with tubercle-based hairs. A. ciliata, *Anderss. l. c.* 177-179.—"Hardly a distinct variety," Hackel.

Var. *villosula*; spathe half as long as its spike, sessile spikelet $\frac{1}{4}$ in., bulbous base of rachis $\frac{1}{12}$ in., gl. I and pedicel scabrous-pubescent, terminal spikelet shorter than the sessile, pedicelled spikelet $\frac{1}{12}$ in. ciliate. A. communis, *Nees & Arn. in Nov. Act. l. c.* 194; *Anderss. l. c.* 177, t. 5, 2. A. villosa, *Schreb. Beschr. Græs.* 98?—*Wight Cat.* n. 1713.

Var. *rostrata*; spike strongly incurved far exserted beyond the spathe, spikelet $\frac{1}{4}$ in., callus $\frac{1}{8}$–$\frac{1}{5}$ in. A. rostrata, *Arn. & Nees l. c.* 194. *Wight Cat.* n. 1714.—Apluda, *Wall. Cat.* n. 8762.

45. **VOSSIA**, *Wall. & Griff.*

A gigantic floating grass. *Spikes* terminal, solitary or 2- (rarely 3–6-) nate, stout; rachis narrow, compressed, flexuous, jointed. *Spikelets* 2-fld., imbricate, 2-nate, longer than the subexcavate joints, one sessile by a very broad callus; the other smaller pedicelled. *Glumes* 4, I very broad, ovate, flattened, coriaceous, smooth, narrowed into a long rigid green tail; II chartaceous, ovate-lanceolate, acute, 3-nerved, keeled above; III hyaline, 2-nerved, paleate, male; IV hyaline, oblong, 3-nerved, tip ciliate, palea 2-nerved. *Lodicules* large, toothed. *Anthers* 3, long. *Styles* distinct, stigmas short. *Grain* unknown.

V. procera, *Wall. & Griff. in Journ. As. Soc. Beng.* v. (1836) 573, t. 23; *Wall. Cat.* n. 8878; *Grant in Trans. Linn. Soc.* xxix. 175, t. 116; *Hack. Monogr. Androp.* 270. V. cuspidata, *Griff. Notul.* iii. *Index* p. xii., *Ic. Pl. Asiat. Index* p. v. t. 153. Ischæmum cuspidatum, *Roxb. Fl. Ind.* i. 324; *Kunth Enum. Pl.* i. 516; *Griff. Notul.* iii. 70. I. ensiforme, *Herb. Ham. ex Wall. Cat. l. c.*

Jheels of BENGAL, SILHET and ASSAM.—DISTRIB. Afr. trop.

Stem 6–12 ft., spongy, as thick as the thumb, rooting at the lower nodes. *Leaves* 1–2 ft., linear, acuminate, hispidulous, midrib stout; sheath large; ligule densely ciliate. *Spikes* 6–8 in., nearly terete; rachis narrower than the gls., margins ciliolate; joints $\frac{1}{4}$ in., and pedicels cupped at the tip. *Spikelets* 1–1$\frac{1}{2}$ in. with the spreading ciliolate tail of gl. I, green, callus annular.—Hardly generically different from *Ischæmum*.

46. **ROTTBOELLIA**, *Linn. f.*

Tall, annual or perennial grasses. *Spikes* few or many, subsolitary or panicled rarely racemose or panicled; rachis usually fragile, joints usually excavate at the tip. *Spikelets* 2- rarely 3-nate, one (rarely two) sessile and both or one only perfect, the other pedicelled imperfect, with the pedicel often adnate to the joint. *Sessile spikelets*, glumes 4, I coriaceous, flat or slightly convex, obtuse or acute, rarely 1–2-awned; II thinner, keeled; III hyaline, neuter or male; IV hyaline, 1 or 3-nerved, usually paleate, palea usually 2-nerved. *Lodicules* 2, truncate. *Stamens* 3. *Styles* distant. *Grain* oblong or obovoid, subcompressed dorsally.—Species about 30, temperate and tropical.

I have followed Hackel for the most part in the disposition of the species of the first four sections of the genus. For my departure from him in the fifth see remarks under *Ophiurus* (p. 160).

A. Sessile spikelets solitary in all the joints of the spike.

Sect. I. PHACELURUS, *Hack.* *Spikes* digitately racemed (rarely solitary), rachis fragile, tips of joints flat, not hollowed. *Spikelets* 2-fld.—Phacelurus, *Griseb.* (gen.)

1. **R. speciosa,** *Hack. Monogr. Androp.* 282; perennial, spikes solitary or alternate or subdigitately fascicled 2–3½ in. long, spikelets ⅙–¼ in. 1-fld., gl. I flat 11–13-nerved. Ischæmum speciosum, *Nees ex Steud. Syn. Gram.* i. 375. Andropogon speciosus, *Steud. l. c.* Vossia speciosa, *Benth. in Journ. Linn. Soc.* xix. (2881) 70; *Duthie Grass. N.W. Ind.* 18, *Fodd. Grass. N. Ind.* 32.

WESTERN TEMPERATE HIMALAYA, alt. 5500–9000 ft., from Kashmir to Garwhal, *Royle*, &c.

Stems tufted, 1–4 ft., stout or slender, simple above. *Leaves* 6–12 by ¼–½ in., linear, hispid or glabrate, margins scabrid; sheath glabrous or margins above hairy; ligule a ciliate border. *Spikes* 3–6 in., rarely solitary, glabrous, green or purplish; joints about as long as the spikelets, subclavate, trigonous, angles ciliate. *Spikelets* lanceolate, glabrous; gl. I obtuse, tip oblique, margins narrowly inflexed, keels scaberulous; II navicular, acute; III lanceolate, 3–5-nerved; IV elliptic-lanceolate, 1-nerved.

Sect. II. THYRSOSTACHYS, *Hack.* *Spikes* panicled, lower whorled, peduncled; rachis fragile, tips of joints hollowed. *Spikelets* 1-fld.

2. **R. Zea,** *Clarke in Journ. Linn. Soc.* xxv. (1889) 86, fig. 38; panicle thyrsiform or pyramidal, spikes smaller upwards, spikelets ⅙ in., gl. I scabrid 1–3-nerved. *Hack. Monogr. Androp.* 690. R. thyrsoidea, *Hack. l. c.* 283.

KHASIA HILLS, alt. 2–3000 ft., *J. D. H. & T. T.*, *Clarke*. MUNNEPORE, alt. 3500 ft., *Clarke*. UPPER BURMA; at Camein on the Mogaung river, *Griffith*.

Stem tall, 6–8 ft., very stout, as thick as the forefinger below, erect, simple or sparingly branched, nodes silky. *Leaves* large, 2–3 ft. by 1–1½ in., linear, flat or complicate, glabrous, margins scabrid; sheaths subcompressed; ligule short, truncate. *Panicle* 10–20 in. long, long-peduncled, rachis very stout, strict. *Spikes* erecto-patent, lower branched, sometimes distichously; rachis stout, flexuous or zigzag, joints about as long as the spikelets, subclavate, glabrous. *Spikelets* glabrous; gl. I obtuse, dorsally scabrid, 1–3-nerved, margins narrowly inflexed, keels scaberulous; II ovate, acute, 3-nerved; III lanceolate; IV oblong, obtuse.

Sect. III. HEMARTHRIA, *Hack.* *Spikes* solitary or fascicled, compressed; joints coherent or subfragile, tips obliquely or transversely truncate, not hollowed. *Spikelets* of each pair similar, pedicel of upper usually adnate to the joint of the rachis.—Hemarthria, *Br.* (Gen.).

3. **R. compressa,** *Linn f. Suppl.* 114; rachis of spike coherent, sessile spikelets $\frac{1}{10}$–$\frac{1}{5}$ in., callus distinct, gl. I of sessile spikelets coriaceous obtuse or acute 7–9-nerved, gl. II of pedicelled acuminate or shortly awned 7–9-nerved.

Throughout the hotter parts of INDIA, generally in wet places, Burma and CEYLON.—DISTRIB. Westwards to Spain and the Canaries, and in most warm climates.

Erect or decumbent below, usually branched throughout, leafy; nodes glabrous or pubescent. *Leaves* short or long, linear, acute, margins and sometimes the upper surface scaberulous; mouth of sheath hairy. *Spikes* solitary or fascicled, 2½–5 in. long, slender, erect, rarely branching; gl. I of pedicelled spikelets subulate or narrowly lanceolate, tip scabrid.—A polymorphous grass, whose Indian varieties are disposed of as follows by Hackel:—

Var. α. *genuina*, Hack. l. c.; stems creeping below, then erect, scandent, 5–20 ft. long (*Roxb.*), spikes slender solitary or 2–3-nate, spikelets $\frac{1}{7}$–$\frac{1}{6}$ in., gl. I broad ovate-lanceolate obtuse not constricted below the tip. R. glabra, *Roxb. Fl. Ind.* i. 353; *Wall. Cat.* n. 8871 A. R. anceps & quarterna, *Herb. Ham. ex Wall. l. c.* B. C. Hemarthria compressa. *Kunth Enum.* i. 465 (*in part*); *Grah. Cat. Bomb. Pl.* 233; *Thw. Enum. Pl. Zeyl.* 364; *Trim. Cat. Ceyl. Pl.* 107; *Aitchis. Cat. Panjab. Pl.* 172; *Duthie Grass. N.W. Ind.* 18, *Fodd. Grass. N. Ind.* 30. H. coromandelina, *Steud. Syn.* 358.—Common in India.—Hackel does not notice Roxburgh's description of this grass as scandent, and attaining 20 ft. in length.

Var. β. *fasciculata,* Hack. l.c.; stem 2–5 ft. creeping, then erect, upper spikes usually fascicled longer stouter often curved, spikelets $\frac{1}{8}$–$\frac{1}{4}$ in., gl. I of sessile constricted below the tip. R. altissima, *Poir. Voy. Barb.* ii. 105. R. compressa, *Linn. f. Suppl.* 114; *Retz. Obs.* iii. 12; *Roxb. Fl. Ind.* i. 354. R. fasciculata, *Lamk. Ill.* i. 204; *Desf. Fl. Atlant.* t. 36. R. spathacea, *Ten. Fl. Nap. Prodr.* p. xi. Lodicularia capensis, *Nees Fl. Afr. Austr.* 128. L. fasciculata, *Beauv. Agrost.* 108; *Wight Cat.* n. 1721. L. fastigiata, *Herb. Beauv.* (*non Agrostogr.*). L. laxa, *Nees ex Steud. l. c.* 358. L. peruviana, *Meyen Reise*, ii. 71. Lepturus fasciculatus, *Trin. Fund. Agrost.* 123. Hemarthria capensis, *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1833) 248. H. caudiculata, *Steud. l. c.* 359. H. fasciculata, *Kunth Revis. Gram.* i. 153, *Enum.* i. 465; *Benth. Fl. Hongk.* 418; *Hack. in Mart. Fl. Bras.* ii. 111, 314, t. 72, f. 2; *Duthie Grass. N.W. Ind.* 13, *Fodd. Grass. N. Ind.* 30. H. laxa, *Steud. l. c.* 358. —Hemarthria, *Wall. Cat.* n. 8871 (*in part*).—Common especially on the borders of pools often climbing amongst bushes.

Var. δ. *japonica*, Hack. l. c. 288; leaves with setaceous tips, upper spikes subfascicled stout, spikelets $\frac{1}{4}$–$\frac{1}{3}$ in., gl. I sessile hardly constricted below the subobtuse tip 7–11-nerved, of pedicelled lanceolate not subulate.—Hackel says of this Japan plant that "Wallich's n. 8868 B is exceedingly like it." But that number of Wallich's Herb. is *Ratzeburghia pulcherrima*, and there is no B under it.

4. **R. protensa,** *Hack. Monogr. Androp.* 289; rachis of spike firm, sessile spikelet $\frac{1}{5}$ in. lanceolate, callus obscure, gl. I subacute many-nerved, gl. II of pedicelled spikelet lanceolate narrowed into a long slender awn 1–3-nerved. R. repens, *Roxb. mss. ex Wall. Cat.* Hemarthria protensa, *Steud. Syn. Gram.* 359. ? H. vaginata, *Bühse Pl. Jungh.* iii. 354 (*ex Hack.*).—Hemarthria, *Wall. Cat.* n. 8872, 8910.

ASSAM, BENGAL, SILHET, CACHAR and the KHASIA HILLS, in marshes. ? LACCADIVE ISLDS., *A. B. Hume.*

Stem 3–6 ft., erect from a decumbent base, stout, leafy, flowering from all the nodes. *Leaves* 3-12 by $\frac{1}{6}$–$\frac{1}{4}$ in., linear-lanceolate, acuminate, narrowed from below the middle to the base, surfaces and margins smooth, glabrous; sheath glabrous or hairy. *Spikes* 4–8 in., slender, joints shorter than the sessile spikelets, top transversely truncate; pedicels adnate to the joints. *Sessile spikelets* linear-lanceolate; gl. I narrowed from the middle upwards; II more or less usually wholly adnate to the joint, IV very short or 0. *Pedicelled spikelets*, gl. I 7-nerved; II $\frac{1}{3}$–$\frac{1}{2}$ in., keel excentric.—Very nearly allied to *R. compressa.* "The only Androp. grass in which fruiting spikelets are not detached, hence there can be no dissemination except from the whole spike," Hackel. The Laccadive Islds. specimens are very slender with narrow leaves and quite erect strict lanceolate finely acuminate spikelets, rather longer than the joints.

Var. *Hamiltoniana*; callus of sessile spikelets bearded with short hairs. ? R. Hamiltoni, *Trin. mss. ex Steud. Nom. Ed.* II. ii. 474. R. compressa, *Wall. Cat.* n. 8870 A. C. R. compressa *var.* Hamiltoniana, *Hack. Monogr. Androp.* 288. Hemarthria Hamiltoniana, *Steud. Syn. Gram.* 358. Lodicularia Hamiltoniana, *Nees ex Steud. l. c.* 359.—Lower Gangetic Plain; Nathpur, *Hamilton.*—Referred to *compressa* by Hackel, but I think nearer to *protensa.*

5. **R. longiflora,** *Hook. f.*; spikes short, rachis firm, sessile spikelets $\frac{1}{3}$–$\frac{1}{2}$ in. lanceolate narrowed into a long point, callus obscure, gl. II rather longer subaristate, pedicelled spikelets like the sessile.

TENASSERIM; at Mergui, *Griffith.* ASSAM, *Herb. Munro.*

Stem 1–2 ft., erect, leafy, stout, spongy; nodes glabrous or pubescent. *Leaves* 3–6 by $\frac{1}{4}$–$\frac{1}{3}$ in., linear-lanceolate from a rounded base, flaccid, smooth, glabrous, margins smooth; sheath inflated; ligule short, membranous. *Spikes* 4–6 in., sheathed below, stout, nearly $\frac{1}{4}$ in. across the spikelets; rachis subtetragonous. *Spikelets* twice as long as the joints, the pedicelled rather longer and longer awned than the sessile; gl. II adnate to the joint; III of sessile spikelet oblong, obtuse, nerveless; IV like III, palea small. *Lodicules* quadrate, broader than long, membranous. Gl. IV of *pedicelled spikelet* narrower than the sessile, paleate, with imperfect stamens and pistil.—Resembles a very large state of *R. protensa.*

Sect. IV. PELTOPHORUS and CŒLORHACHIS, *Hack.* *Spikes* solitary or fascicled, fragile, terete or compressed; joints transversely (rarely obliquely) truncate, deeply hollowed, dorsally convex, ventrally excavate; pedicel of upper spikelet free or adnate to the joint of the rachis, tip hollowed. Peltophorus, *Desv.* (Gen.).

* *Gl. I of sessile spikelets broadly winged.*

6. **R. Myurus,** *Benth. in Journ. Linn. Soc.* xix. (1881) 68; perennial, gl. I of sessile spikelet panduriform dilated above the middle into an orbicular wing, and towards the base into two auricles joined by a transverse ridge. *Hack. Monogr. Androp.* 290. Manisuris Myurus, *Linn. Mant.* ii. 300; *Desv. ex Beauv. Agrost.* 14, t. 1; *Rottl. in Neue Schrift. Nat. Fr. Berl.* iv. (1803) 191; *Roxb. Corom. Pl.* ii. 10, t. 117, *Fl. Ind.* i. 351; *Schreb. Beschr. Graese,* t. 43; *Kunth Enum. Pl.* i. 470; *Griff. Notul.* iii. 100; *Miq. Fl. Ind. Bat.* iii. 410. Peltophorus Myurus, *Desv. in Nouv. Bull. Soc. Philom.* ii. (1810) 188, *Journ. Bot.* i. (1813) 73; *Beauv. Agrost.* 119, t. 21, f. 11; *Wall. Cat.* n. 5880; *Wight Cat.* n. 1725, *Herb.* n. 3071. Ischæmum, Myurus & Ægilops sanguinea, *Herb. Linn.*

The Deccan Peninsula, *Heyne, Wight,* &c., in dry places.

Stem creeping and rooting, with ascending compressed branches 6–28 in. high. *Leaves* 2–6 in., spreading, linear, acute, flat, glabrous; sheath compressed, margins ciliate; ligule short, ciliate. *Spikes* 1–2 in., solitary, terminal and axillary, shortly exserted; joints scaberulous, shorter than the spikelets, excavate on each side leaving a pore between the spikelet and joint. *Sessile spikelets* $\frac{1}{10}$ in., brown, callus minute; gl. I scaberulous, 5-nerved, wing scarious; II ovate, acute, 3-nerved; III oblong, obtuse, empty; IV lanceolate, nerveless; palea obsolete. *Pedicelled spikelets*; gl. I oblong, obtuse, 5-nerved, winged on one side; II navicular, 3-nerved; III 3-nerved, paleate; IV oblong, obtuse, male; pedicel free or adnate to the joint.

7. **R. acuminata,** *Hack. Monogr. Androp.* 291; annual, spikes short, gl. I of sessile spikelet broadly ovate acuminate winged above the middle, coriaceous below it with 3 to 6 dorsal transverse echinulate or warted ridges.

The DECCAN PENINSULA, *G. Thomson*; N. Canara; Carwar, *Talbot.*

Stem 3–12 in., ascending from a creeping base, compressed, leafy. *Leaves* flaccid, lower 2–3 in., linear-lanceolate from a narrow base, acuminate, upper shorter spreading and recurved; sheath turgid, compressed, keeled, mouth hairy; ligule short, truncate, glabrous. *Spikes* 1–2 in.; joints subclavate, much shorter than the sessile spikelets, base not excised. *Sessile spikelets* $\frac{1}{4}$–$\frac{1}{3}$ in., callus obscure; gl. I 5-nerved in the narrow coriaceous part between the wings; II elliptic-lanceolate, acute, 3-nerved; III elliptic, paleate, male; IV short, oblong, obtuse; palea small, 2-lobed, nerveless. *Pedicelled spikelet*; gl. I winged on one side, 5-nerved, base not tubercled; II 3-nerved; IV male, lanceolate, many times longer than the joint.

Var. *Stocksii*; diffusely branched from the root, gl. I of pedicelled spikelet $\frac{1}{5}$ in. subulate-lanceolate erect or recurved narrowed into a slender scaberulous awn not or obscurely winged.—Malwar, *Stocks.*—The long gls. of the pedicelled spikelets give this variety a very different appearance, but intermediates occur, and the specimens were mixed with those of *R. acuminata* proper.

8. **R. divergens,** *Hack. Monogr. Androp.* 293; annual, spikes short, gl. I of sessile spikelet crossed below the middle with echinulate ridges ovate 2-mucronate or 2-aristate with broad hyaline wings above the middle. *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vi. (1891) 195.

EAST INDIES, *Huegel.* The CONCAN and CANARA; Belgaum, *Ritchie*; Satara and Mahableshwar, *Lisboa.*

Stem 4–10 in., erect or ascending, slender, terete, nodes 2–3 all with 2-nate flowering branches. *Leaves* 1$\frac{1}{4}$–1$\frac{1}{2}$ in., narrowly linear, hairy beneath and on the margins; sheath compressed, naked, hairy; ligule short, membranous, rounded. *Spikes* about $\frac{2}{3}$ in., slender, erect, pale; joints shorter than the spikelets, subclavate, excised, outer margins of the cavities ciliate. *Sessile spikelets* $\frac{1}{10}$–$\frac{1}{8}$ in., broadly oblong, dorsally with 7 lines of small pits (Hackel) or rugose with long or short transverse tubercled or echinate ridges or crests, mucros or awns erect scabrid sometimes as long as the spikelet; II shorter, ovate, acute, keeled, 3-nerved, III broadly ovate, nerveless, empty; IV = III, ovate-oblong, obtuse, nerveless. *Pedicelled spikelets* lanceolate; gl. I smooth, 5-nerved, broadly inflexed on one side with a winged keel, on the other produced into a mucro; II lanceolate, acute, keel winged; pedicel adnate.—The ridges on gl. I of the sessile spikelet are very variable, and are sometimes replaced as it were by vertical rows of incurved spinules on the nerves.

9. **R. Talboti,** *Hook. f.* (*non Lisboa*); annual, leaves linear, spikes solitary short, gl. I of sessile spikelet lanceolate narrowed into a slender scabrid awn, and with 3 transverse ciliolate ridges towards the base broadly winged above it, pedicel of upper spikelet adnate to the joint of the rachis.

GOA DISTRICT, *Talbot.*

Stems 6–8 in., slender, erect or base geniculate, subsimple. *Leaves* 2–3 in., narrow, smooth; sheath glabrous; ligule short, membranous. *Peduncles* 2–3 in., very slender, flexuous. *Spikes* $\frac{1}{6}$ in. diam., green, joints very short, tumid, excavate opposite the spikelet, top broad, cavity very large, margins thick hispidulous. *Spikelets* closely imbricating, $\frac{1}{2}$ in. long including the awn; callus annular, ciliolate; gl. I of sessile spikelet many-nerved on the coriaceous disk; II much shorter, hyaline, ovate-oblong, acute, 1-nerved; III broadly oblong, tip rounded, faintly 3-nerved, male; IV small, oblong, obtuse, nerveless, palea as long nerveless. *Pedicelled* *spikelets* as long as the sessile; gl. I very unequally winged, dorsally smooth, awn as in the sessile; pedicel wholly adnate to the joint of the rachis.

10. **R. Clarkei,** *Hack. in Œstr. Bot. Zeitschr.* xli. (1891) 8; annual, leaves lanceolate base cordate, spikes solitary short, gl. I of sessile spikelet orbicular-oblong dorsally gibbous and scabrid below the middle winged above it, tip notched, pedicel of upper spikelet quite free. R. gibbosa, *Hack. ex Lisboa in Bomb. Journ. Nat. Hist.* vi. (1891) 195. R. Talboti, *Lisboa mss. l. c.*

BEHAR, on Parusnath; and Hazaribagh, in CHOTA NAGPORE, alt. 2000 ft., *Clarke.* BOMBAY; N. Kundra District, *Talbot, Lisboa.*

Stem 6–8 in., branched, erect, compressed. *Leaves* 3–5 by $\frac{1}{4}$–$\frac{1}{3}$ in., acuminate, glabrous or hairy; sheath ciliate; ligule of hairs. *Spikes* $\frac{1}{2}$–1 in., erect, rachis fragile, joints clavate shorter than the spikelets, tips ciliolate, side not hollowed. *Spikelets* $\frac{1}{10}$–$\frac{1}{8}$ in., closely imbricating. Gl. I of *sessile spikelet* with a coriaceous 3–5-nerved disk and ciliate hyaline wings; II much smaller, ovate, 1-nerved; III ovate, obtuse, hyaline, nerveless; IV much smaller, broadly oblong, obtuse, nerveless, sides incurved, palea like the gl. nerveless. *Pedicelled spikelet* like the sessile, but smaller and less gibbous; pedicel pyriformly clavate, truncate, top scaberulous.

** *Gl. I of sessile spikelet winged at the tip only or narrowly on the margins.*

11. **R. exaltata,** *Linn. f. Suppl.* 114; annual, leaf-base narrow rounded tip setaceous, gl. I of sessile spikelet very coriaceous about as long as the joint obtuse hardly margined or winged dorsally flat smooth, pedicels of upper spikelet shorter than the joints. *Kunth Enum. Pl.* i. 466; *Hack. Monogr. Androp.* 294; *Steud. Syn. Gram.* 361; *Roxb. Corom. Pl.* ii. 30, t. 157, *Fl. Ind.* i. 354; *Grah. Cat. Bomb. Pl.* 233; *Thw. Enum. Pl. Zeyl.* 364; *Trim. Cat. Ceyl. Pl.* 107; *Aitchis. Cat. Panjab. Pl.* 172; *Duthie Grass. N.W. Ind.* 17; *Lisboa in Bomb. Journ. Nat. Hist.* vi. (1891) 196; *Miq. Fl. Ind. Bat.* iii. 406; *Br. Prodr.* 206; *Benth. Fl. Austral.* vii. 513; *Baker Fl. Maurit.* 457; *Wall. Cat.* n. 8875; *Wight Cat.* n. 1724, *Herb.* n. 3286. R. arundinacea, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 444; *Steud. l. c.* 362. R. denudata, *Steud.*; *Miq. l. c.* 408. R. gymnorhiza, *Herb. Ham. ex Wall. Cat.* n. 8875. R. hispida, *Herb. Roxb.* R. setosa, *Presl Rel. Hænk.* i. 329. Ophiurus appendiculatus, *Steud. l. c.* 359. Stegoasia cochinchinensis, *Lour. Fl. Cochinch.* 51.

Plains and lower hills of INDIA, from the N.W. Provinces to ASSAM and BURMA (ascending the HIMALAYA in Garwhal to 7000 ft.), and southward to Travancore and CEYLON. ANDAMAN ISLDS., *Prain.*—DISTRIB. China, Malaya, Australia, Africa.

Stems 6–10 ft., stout, erect, spongy within, as thick as the little finger below and hispid. *Leaves* 6–24 by $\frac{1}{4}$–1 in., linear-lanceolate, setaceously acuminate, scabrid or hispid above, margins scabrid; sheath hispid with tubercle-based hairs or glabrate. *Spikes* 3–6 in., stout, cylindric below, much narrowed with imperfect spikelets above; joints smooth, scaberulous. *Sessile spikelets* $\frac{1}{6}$–$\frac{1}{5}$ in.; gl. I ovate-oblong, 2-fld., keels scaberulous narrowly winged, entire or emarginate; II broadly ovate, chartaceous, convex, 9–11-nerved, keel scabrid; III elliptic, 3-nerved, male, margins inflexed; IV shorter, convex, ovate, acute or mucronate. *Pedicelled spikelets* with the pedicel usually adnate by one margin to the joint, 1–2-fld. or neuter.

Var. *robusta*; leaf-base more cordately confluent with the sheath, spikes stouter below, slender above the middle, spikelets in upper half distichously imbricate longer than the joints, fertile nearly to the tip, palea of gl. IV auricled at the base.—Malabar and at Palamcotta, *Wight Herb.* n. 3286; *Wall. Cat.* n. 8875 E. Poona, *Woodrow.*

12. **R. nigrescens,** *Thw. Enum. Pl. Zeyl.* 364; leaf-base cordate, spike fragile, gl. I of sessile spikelet ovate-oblong very obtuse or 3-lobulate dorsally tessellately foveolate obscurely 2-winged in the upper third or tip. *Hack. Monogr. Androp.* 296; *Trim. Cat. Ceyl. Pl.* 107.

Ceylon; Central Province, alt. 4000 ft., *Thwaites.*

Stem tall, suberect, slender, glabrous. *Leaves* 4–8 in., linear-lanceolate, glabrous or sparsely hairy, margins scabrid, base ciliate; sheath glabrous or sparsely hirsute; ligule rounded, ciliate. *Spikes* 2–3 in., solitary or 2-nate, axillary and terminal; joints as long as the spikelet, stout, margins smooth. *Sessile spikelets* ⅛ in., ovate-oblong; gl. I ovate, 9-nerved, wings scarious; II elliptic, obtuse, gibbous, keel winged below the tip; III hyaline, oblong, obtuse, paleate, nerveless; IV elliptic, obtuse, emarginate. *Pedicelled spikelets*; gl. I smooth, striate, winged above on one side, 7–9-nerved; II 5-nerved, keel excentric, winged; III and IV as in the sessile spikelet; pedicel adnate to the joint.

13. **R. striata,** *Nees ex Steud. Syn. Gram.* 361; leaf-base narrowed, spikes fascicled, often on very long peduncles, gl. I of sessile spikelet oblong-lanceolate shortly winged below the tip dorsally smooth with 4–6 often interrupted grooves below the middle. *Hack. Monogr. Androp.* 301.—*Wall. Cat.* n. 8876, 8877.

Sikkim Himalaya, alt. 1–4000 ft., *J. D. H.*, &c. Silhet and the Khasia Hills, *Wallich*, &c. Burma and Singapore, *Wallich*, &c.

Stem 3–4 ft., slender, thickened under the spikes, smooth, branched above. *Leaves* 2–4 ft. by ⅓–2 in., linear-lanceolate, setaceously acuminate, flat, midrib broad; sheaths glabrous, upper spathiform; ligule very short, membranous. *Spikes* 1–2 in., pale, slender, terete, glabrous. *Sessile spikelets* as long as the joints; callus annular, glabrous; gl. I obtuse, convex, many-nerved within, keels smooth; II chartaceous, ovate, subacute, acutely keeled, 1-nerved; III ovate, acute, hyaline, nerveless, paleate; IV ovate, faintly 1-nerved. *Pedicel of upper spikelet* linear, flattened, free or ½ or wholly adnate to the joint, tip hollowed, circular or compressed. Hackel has two subspecies.

Subsp. *genuina*; leaves 1–2 ft. by ⅓–⅔ in., spikes in a simple lax panicle, joints of rachis scaberulous, sessile spikelets ⅕ in., pedicelled spikelets of one long obtuse glume winged on one side.—Of this there are two vars., *α. glabrior*, stems and surfaces of leaves quite glabrous, margin of leaves and sheaths ciliate.—Singapore and Tavoy; and *β. pubescens*, stem above and surfaces of leaves pubescent.—Khasia Hills.

Subsp. *khasiana*; stem very tall much branched, leaves 3–4 ft. by 1–2 in., spikes 1–1½ in. in a compound panicle; joints smooth, sessile spikelets ⅙ in., gl. I more broadly winged, pedicelled spikelet ⅛ in., oblong. R. khasiana, *Munro mss.*—Sikkim and the Khasia Hills.

14. **R. glandulosa,** *Trin. in Mem. Acad. Petersb. Ser.* 6, ii. (1833) 250; perennial, spikes fragile, sessile spikelets ovate-lanceolate, gl. I narrowly winged in the upper third, dorsally scaberulous, margins below with on each side 5–7 upcurved mucros or tubercles. *Hack. Monogr. Androp.* 302; *Miq. Fl. Ind. Bat.* iii. 408. Cœlorachis muricata, *Brongn. in Duperr. Voy. Bot.* i. 65, t. 14. Ophiurus muricatulus, *Steud. in Zoll. Syst. Verz.* 57, *Syn. Gram.* 360.—Rottboellia ?, *Wall. Cat.* n. 8887 B.

Burma, *Wallich.* Malay Peninsula; Singapore, *Wallich*; Malacca, *Griffith*; Perak, *King's Collector*; Pahang, *Ridley.*—Distrib. Java, Philippines.

Stem 3–8 ft., tall, stout, branched, nodes pubescent or bearded. *Leaves* 2–3 ft. by ½–1 in., linear, caudate-acuminate, base usually fimbriate, margin scabridly serrulate; sheath bearded at the mouth; ligule densely hairy. *Spikes* many, 2½–4 in., slender, terete, pale or violet. *Sessile spikelets* ⅙–⅕ in., 1-fid, rather shorter than the glabrous joints; gl. I flat, obtuse, dorsally scaberulous; II chartaceous, elliptic-lanceolate, ciliolate; III ovate-oblong, obtuse; IV hyaline, 3-nerved; palea truncate, nerveless. *Pedicelled spikelets* reduced to a solitary gl. winged on one side, rarely with a second; pedicel adnate to the joint of the rachis.—A solitary specimen of a closely allied, I think, undescribed, species from Rangoon, *McLelland*, has caudate acuminate leaves, solitary spikes, sessile spikelets longer than the joints, gl. I narrowly oblong, margins smooth.

15. **R. Helferi,** *Hook. f.*; perennial, spikes solitary fragile subsessile in the sheaths, joints very short pyriform, sessile spikelets longer than the joints, gl. I ovate obtuse narrowly winged above the middle, back and sides smooth.

TENASSERIM, *Helfer.*

Stem 1–2 ft., slender, erect, from a nodose stock, sparingly branched above; nodes faintly bearded. *Leaves* 1–2 ft. by $\frac{1}{3}$–$\frac{1}{2}$ in., erect, linear from a hardly narrowed base, finely acuminate, hairy on both surfaces; sheath glabrous, bearded at the tip. *Spikes* 1–4 in., slender, erect; joints $\frac{1}{12}$ in., excavate on one side, base shortly hairy. *Spikelets* $\frac{1}{8}$ in.; gl. I broadly ovate, narrowed suddenly above the middle, smooth, glabrous, or slightly pubescent on the sides below, wings serrulate; II ovate, acuminate, chartaceous, 1-nerved, keeled, faintly obliquely winged above, III broadly ovate, obtuse, hyaline, faintly 3-nerved, palea small 2-toothed; IV ovate, obtuse or subacute; palea broad, truncate, 2-nerved. *Pedicel* of upper spikelet longer than the joint, linear, flattened, strongly 2-nerved, ciliolate at the base; spikelet reduced to a minute ovate glume.

B. Sessile spikelets geminate in all but the uppermost joints of the spike.

Sect. V. MNESITHEA, *Kunth* (genus).

16. **R. perforata,** *Roxb. Pl. Corom.* ii. 43, t. 182, *Fl. Ind.* i. 356; leaves very narrow, spikelets glabrous, pedicelled spikelets reduced to a minute gl. R. lævis, *Retz. Obs.* iii. 11; *Steud. Syn. Gram.* 362. Ophiurus perforatus, *Trin. in Mem. Acad. Petersb. Ser.* 6, ii. (1833) 246; *Hack. Monogr. Androp.* 319. O. lævis, *Benth. in Journ. Linn. Soc.* xix. (1881) 69; *Trim. Cat. Ceyl. Pl.* 107; *Duthie Grass. N.W. Ind.* 17, *Fodd. Grass. N. Ind.* 29; *Lisboa in Bomb. Journ. Nat. Hist.* vi. (1891) 193. Mnesithea lævis, *Kunth Revis. Gram.* i. 154, *Enum. Pl.* i. 466, *Suppl.* 375, t. 18, f. 3; *Thw. Enum. Pl. Zeyl.* 364; *Wall. Cat.* n. 8873; *Wight Cat.* n. 1722; *Aitchis. Cat. Panjab. Pl.* 172. Hemarthria? perforata, *Kunth l. c.* 453, *Enum.* i. 465. Diperium cylindricum, *Desv. Opusc.* 76, t. 6, f. 3. Thyridostachyum læve, *Nees in Lindl. Introd. Nat. Syst. Ed.* II. 379. Ægilops cuneata, *Herb. Roxb.*

Throughout INDIA, from the INDUS to BURMA and southward to CEYLON.—DISTRIB. Affghan., Java.

Stem 2–4 ft., rather slender, simple or branched above; nodes few. *Leaves* 6–30 by $\frac{1}{8}$ in., flat (conduplicate in vernation), linear from a narrow base, glabrous or base hairy, upper acute, lower obtuse, margins scaberulous; sheath terete; ligule very short. *Spikes* 4–8 in., shortly exserted, joints semi-cylindric, excavate on opposite sides with the pedicel of the imperfect spikelets between the opposite fertile spikelets. *Spikelets* $\frac{1}{7}$–$\frac{1}{5}$ in.; gl. I oblique, smooth or pitted above the base.

17. **R. merguensis,** *Hook. f.*; leaves $\frac{1}{4}$–$\frac{1}{2}$ in. broad, spikelets glabrous, pedicelled spikelet minute imperfect.

TENASSERIM; Mergui, *Griffith*, *Helfer*.

Habit of *R. perforata*, but at once distinguished by its greater size, and broad leaves which attain an inch in breadth with the tip finely acuminate, base rather narrowed, margins ciliate below the middle or towards the base only, both surfaces glabrous; sheath with glabrous or ciliate margins. *Spikes* 2–3 in., long peduncled; top of peduncle slightly clavate; joints ⅛ in., about as long as the spikelets, clavate, quite smooth. *Sessile spikelets* ovate-oblong, winged at the top, quite smooth or with a few linear impressed pits, margins naked or obscurely ciliate.

18. **R. geminata,** *Hack. in Œstr. Bot. Zeit.* xli. (1891) 48; gl. I of sessile spikelets hirsute below with tubercle-based hairs.

MALAY PENINSULA; Pahang, *Ridley*.

Stems upwards of 2 ft. high, sparingly branched and flowering above; nodes bearded with reflexed hairs. *Leaves* 12 by ⅛–⅕ in., linear, acuminate, rigidulous; sheaths appressed, mouths bearded; ligule short, membranous. *Spikes* about 2½ by ⅛ in., green, fragile; joints about ¼ in., shorter and as broad as the spikelets, clavate, dorsally convex, ventrally and the tops deeply hollowed. *Spikelets* ⅛ in., separated by the narrow pedicel of the withering upper spikelets, dimidiate-ovate, glabrous, callus annular; gl. I coriaceous, acuminate, narrowly winged at the top on each side, margins narrowly inflexed, nerves many very slender, hairs white; II as long as I, ovate, subulate-acuminate, keeled, chartaceous; III shorter, hyaline, ovate, acuminate, empty, nerves 0; IV 1-nerved; palea like its gl.—Description from Hackel; I have not seen it.

UNDETERMINABLE SPECIES.

R. VILLOSA, *Poir. Encycl.* vi. 313; is, according to Hackel (*Monogr. Androp.* 313), probably an *Ischæmum* or *Andropogon*.

47. MANISURIS, *Sw.*

Annual, erect, much branched grasses. *Leaves* cordate at the base. *Spikes* terete, solitary, axillary and terminal, peduncles often confluent in a leafy spiciform panicle; rachis fragile; joints short, deeply excavate, tips with 2 pits. *Spikelets* 1–2-fld., in dissimilar pairs, one globose, sessile, bisexual; the other ovate, pedicelled, neuter, pedicel adnate to the joint of the rachis. *Sessile spikelet*; glumes 4, I hard, globose, foveolate, with an oblong opening opposite the rachis; II chartaceous, immersed in the cavity of I and filling the opening; III hyaline, empty; IV and its palea hyaline. *Lodicules* 2, broadly cuneate. *Anthers* minute. *Styles* free, stigmas short, exserted from the opening in gl. I. *Grain* subglobose.—Species 2, tropical.

1. **M. granularis,** *Linn. f. Nov. Gram. Gen.* 37, f. 7, fig. 4–7; sessile spikelets globose deeply pitted smooth between the pits, gl. II 1-nerved. *Sw. Prodr. Veg. Ind. Occ.* 25 (*partim*), *Fl. Ind. Occ.* i. 186; *Gærtn. Fruct.* ii. 468, t. 175; *Beauv. Agrost.* 119, t. 21, f. 10; *Roxb. Pl. Corom.* ii. 11, t. 118; *Kunth Enum. Pl.* i. 469; *Hack. Monogr. Androp.* 314; *Steud. Syn. Gram. Grah. Cat. Pl. Bomb.* 234; *Dalz. & Gibs. Bomb. Fl.* 300; *Griff. Notul.* iii. 101; *Thw. Enum. Pl. Zeyl.* 364; *Trim. Cat. Ceyl. Pl.* 107; *Duthie Grass. N.W. Ind.* 18, *Fodd. Grass. N. Ind.* 29, t. 46; *Lisboa in Journ. Bomb. Soc. Nat. Hist.* vi. (1891) 196; *Benth. Fl. Austral.* vii. 511; *Miq. Fl. Ind. Bat.* iii. 409; *Griseb. Fl. Brit. W. Ind.* 557; *Doell. in Mart. Fl. Bras.* ii. II. t. 46; *Wall. Cat.* n. 8879; *Wight Cat.* n. 1726. M. polystachya, *Beauv. Fl. Owar. & Ben.* i. 24, t. 14. M. hirta, *Herb. Russ. ex Wall. Cat. l. c.* Cenchrus granularis, *Linn. f. Mant.* ii. *App.* 575.

Throughout the hotter parts of INDIA, from the Panjab eastward to Burma, and southward to CEYLON.—DISTRIB. Most tropical countries.

Stem 1–2½ ft. and leaves softly hairy, leafy to the top, as thick as a crow-quill. *Leaves* 4–10 by ¼–½ in., flaccid, flat, acuminate; sheaths hirsute, inflated; ligule a raised ciliate margin. *Spikes* ¼–1 in.; peduncle filiform. *Sessile spikelets* $\frac{1}{16}$ in. diam., superposed like minute beads on the rachis, and each as it were bracteate by the upper spikelet of the pair below it.

2. **M. porifera,** *Hack. in Œstr. Bot. Zeitschr.* xli. (1891) 48; sessile spikelets broadly oblong truncate deeply broadly pitted, gl. I 5-nerved between transverse longitudinal ridges, II 3-nerved.

SIKKIM HIMALAYA; Dikeeling, alt. 3000 ft., *Clarke.* TENASSERIM, *Helfer.*

Habit and foliage, &c. of *M. granularis.* *Spikelets* $\frac{1}{12}$–$\frac{1}{10}$ in., brownish; callus smooth or foveolate; gl. I excised at the base on both sides, leaving a rounded pore between it and the rachis.—There is a specimen of this in Herb. Wight, without name or locality.

48. OPHIURUS, *Gærtn.*

Annual or perennial grasses. *Spikes* solitary or fascicled, terete, fragile; joints excavate, top concave. *Spikelets* 2-fld., solitary and sessile in the joints (with no upper or pedicel of one), not awned. *Glumes* 4, I thickly coriaceous, convex, obtuse; II almost membranous, concave, keeled; III elliptic, obtuse, hyaline, faintly 2-nerved, margins infolded, paleate, male; IV as long as III, oblong, obtuse, -nerved, paleate bisexual, palea narrow; IV oblong, obtuse. *Lodicules* 2, cuneate. *Stamens* 3. *Grain* oblong, free. —Species one or two. Tropical Asiatic and African.

Ophiurus, as defined by Hackel and Bentham, is an artificial genus, of which the original species, *O. corymbosus*, has solitary sessile 2-fld. spikelets on each joint of the spike, with no obvious traces of a second, by which character it differs from *Rottboellia.* Of other Indian plants referred to it, *O. perforatus* (*Rottboellia perforata*, Roxb.) has 2 sessile 1-fld. spikelets on each joint of the spike, with a long interposed pedicel of a second perfect or imperfect one. It is the genus *Mnesithea* of Kunth. Two admitted species of *Rottboellia* have the same structure as *O. perforatus*, namely, *R. hirsuta*, Forsk., and *R. geminata*, Hack. These three should form either a separate genus (*Mnesithea*), or a section of *Rottboellia*, which latter course I have adopted. Hackel describes the joints of *O. corymbosus* as being thickened on one side by the presence of the confluent pedicel of a second spikelet, but I find no trace of this (nor can Dr. Stapf), and he describes *R. perforatus* as with one sessile spikelet on each joint, or with two on the lower joints only; but I find that in all the specimens two sessile spikelets is the normal condition almost throughout the spikes, the uppermost joints alone having but one.

O. corymbosus, *Gærtn. f. Fruct.* iii. 4, t. 181, f. 3 a (*Ophiuros*); *Kunth Enum. Pl.* i. 464; *Hack. Monogr. Androp.* 317; *Steud. Syn. Gram.* 359; *Wall. Cat.* n. 8874; *Wight Cat.* n. 1723; *Duthie Grass. N.W. Ind.* 17, *Fodd. Grass. N. Ind.* 29, t. 55; *Lisboa in Bomb. Journ. Nat. Hist.* vi. (1891) 193; *Benth. Fl. Austral.* vii. 512. Rottboellia corymbosa, *Linn. f. Suppl.* 114; *Roxb. Pl. Corom.* ii. 42, t. 181, *Fl. Ind.* i. 355; *Grah. Cat. Bomb. Pl.* 233. R. punctata, *Retz. Obs.* iii. 11. Ægilops exaltata, *Linn. Mant.* ii. *App.* 575; *Retz. l. c.* ii. 27.

Dry hills, ascending to 3500 ft. in the HIMALAYA and KHASIA HILLS, and southward to the DECCAN PENINSULA (not in Ceylon).—DISTRIB. Tonkin, Australia.

Perennial. *Stems* erect from a tuberous base, 5–6 ft., as thick as a goose-quill below, solid, branching upwards, leafy throughout. *Leaves* $\frac{1}{2}$–2 ft. by $\frac{1}{2}$–1 in., flat (convolute in vernation), linear-lanceolate from a rounded base, finely acuminate, hairy above, margins spinulose; sheaths short, terete, upper leafless; ligule very short. *Spikes* corymbosely fascicled, 2–5 by $\frac{1}{12}$ in. diam., erect, often in very dense fascicles, shortly peduncled; joints as long and broad as the spikelets, tips obliquely truncate. *Spikelets* ovate-oblong, obtuse, glabrous; gl. I smooth or scrobiculate, at length recurved.

49. **RATZEBURGIA,** *Kunth.*

A tufted slender perennial grass. *Spikelets* 1-fld., superposed in opposite pairs on a slender simple compressed subfragile spike, each pair sessile on a joint of the rachis, dorsally strongly compressed and appressed face to face (looking like one), rachis prolonged along the margins of the pairs on one side, and with the rachilla of a neuter along the opposite edges. *Glumes* 4, I thickly coriaceous, flat, oblong, deeply pitted, terminated with 2 erect coriaceous wings, margins strongly tubercled; II thinly coriaceous, lanceolate, acute, glabrous; III oblong, obtuse, hyaline, epaleate; IV smaller, epaleate. *Lodicules* obliquely quadrate. *Anthers* 3, short. *Stigmas* long.

R. pulcherrima, *Kunth Revis. Gram.* ii. 487, *Enum. Pl.* i. 468; *Wall. Pl. As Rar.* iii. 253, t. 273 (*Aikinia*), *Cat.* n. 8868; *Hack. Monogr. Androp.* 321. Ophiurus auriculatus. *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1833), 246. Aikinia elegans, *Wall. l. c.*

BURMA; at Paghan and the Petroleum Wells, *Wallich*; Upper Burma, *Collett.*

Stoloniferous; stem 6–18 in., geniculate and leafy below. *Leaves* 1–3 in., narrow, flat, margins thickened, tip rounded; sheath compressed; ligule short. *Spike* 1–2 in., $\frac{1}{8}$ in. broad; peduncle very slender with 2–3 long-sheathed leaves below; joints and pedicels of neuter alike, incurved, obtusely angled, bearded along the inner angle and the hammer-headed top. *Spikelets* about $\frac{1}{6}$ in.; wings of gl. I earlike, sub-lobed.

50. **ELIONURUS,** *Humb. & Bonpl.*

Aromatic grasses. *Spikes* solitary, subsimple, clothed with silky hairs, rachis flattened, jointed, fragile. *Spikelets* 2-nate, a sessile and pedicelled; joints compressed, margins thickened, tips obliquely truncate. *Sessile spikelets* dorsally compressed, 1-fld.; glumes 4, I coriaceous, entire or 2-fid, embracing II by its margins; II narrower, membranous; III hyaline, empty, paleate or not; IV small, hyaline, paleate or not, awn 0. *Lodicules* obliquely quadrate. *Anthers* 3, short. *Styles* short, free. *Grain* narrow, plano-convex, free.—Species about 15, tropical and subtropical.

Hackel observes that *Elionurus* differs from *Rottboellieæ* and agrees with *Euandropogoneæ* in the entire sessile spikelet falling away with the joint, whereas in *Rottboellieæ*, gl. I is removable and II and III persistent in the hollow of the joint. The Aromatic oil of *Elionurus* is contained in the glumes.

1. **E. Royleanus,** *Nees ex A. Rich. Tent. Fl. Abyss.* ii. 471; annual, dwarf, spikes corymbose each sheathed, gl. I of sessile spikelet lanceolate narrowed into a 2-fid beak, margins with penicillate tubercles, III and IV epaleate. *Hack. Monogr. Androp.* 343; *Duthie Grass. N.W. Ind.* 17, *Fodd. Grass. N. Ind.* 28, t. 54. E. Grisebachii, *Schmidt Beitr. Fl. Ins. Cap. Verd.* 154. Rottboellia elegantissima, *Hochst. & Steud. ex Steud. Nom. Ed.* II. ii. 474. Andropogon elegantissimus & Grisebachii, *Steud. Syn. Gram.* 364, 365. Ratzeburgia Schimperi, *Steud. Nom. l. c.* 439.

UPPER GANGETIC PLAIN, *Royle*; Agra and Ettawah, *Duthie*; Delhi, *Clarke.*—DISTRIB. Arabia, Abyssinia, Cape Verd Islds.

Stems 4-12 in., slender, leafy, geniculate. *Leaves* 4–10 in., narrow, flat or convolute, glabrous or sparsely hairy, base fimbriate; lower sheaths terete, upper spathiform; ligule very short. *Spikes* 1–2 in., erect, clustered towards the top of the stem, stout, green or purple, each enclosed in a long narrow flattened acute sheath; joints bearded below the tip. *Sessile spikelets* ¼ in., erect; callus densely bearded; gl. I deeply 2-fid at the top, lobes linear ciliate divergent, sides with a row of large tubercles each carrying a pencil of long hairs; II membranous, linear-lanceolate, acuminate, 1-nerved; III shorter, oblong, acute, nerveless, glabrous, epaleate; IV much shorter, oblong, obtuse, 1-nerved or nerveless. *Pedicelled spikelets* ⅓ in., narrowed almost from the base into a long subulate ciliate blade; II cymbiform, glabrous, narrowed into a scabrid awn; III and IV 0, pedicel with one margin shortly ciliate.

2. **E. hirsutus,** *Munro ex Benth. in Journ. Linn. Soc.* xix. (1881) 68; perennial, spikes peduncled naked, gl. I of sessile spikelet narrowed into a long narrow flat 2-fid beak margins villous, gl. III and IV paleate. *Boiss. Fl. Orient.* v. 466; *Duthie Grass. N.W. Ind.* 17, *Fodd. Grass. N. Ind.* 28, t. 17. Rottboellia hirsuta, *Vahl Symb.* i. 11; *Del. Fl. Ægypt.* t. 14, f. 1; *Kunth Enum Pl.* i. 467; *Hack. Monogr. Androp.* 311. Ischæmum hirsutum, *Nees ex Steud. Syn. Gram.* 361. I. mastucatum, *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1833), 298. Coelorachis hirsuta, *Brongn. in Duperr. Voy. Bot.* 68. Lasiurus hirsutus, *Boiss. Diagn. Pl. Or.* II. iv. (1859) 146. Saccharum hirsutum, *Forsk. Fl. Ægypt. Arab.* 16.

NORTHERN PANJAB; Jelalpoor on the Jhelum, *Jacquemont*; Peshawur, alt. 3500 ft., *Stewart.* RAJPOOTANA; Multan, *Edgeworth*; Sind, *Stocks.*—DISTRIB. Westward to N. Africa.

Rootstock woody, branched. *Stems* 1–2½ ft., ascending from a branching base, stout, smooth, rigid. *Leaves* narrow, coriaceous, sheaths white. *Peduncle* 6–10 in., slender. *Spike* solitary, stout, 2–4 in., silvery silky all over. *Spikelets* imbricating, appressed to the rachis; gl. I of lateral spikelet divergent, narrowly lanceolate, coriaceous, 7–9-nerved; II ⅓ shorter, chartaceous, 5-nerved, aristately acuminate, awn scabrid; III hyaline, oblong, obtuse, faintly nerved, neuter, palea lanceolate, nerves scaberulous; IV oblong, obtuse, faintly 5-nerved, palea as of gl. III but smaller. *Pedicelled spikelet* smaller, erect; gls. shorter, flowerless.—Regarded by Hackell as an anomalous *Rottboellia*, and nearer to *Ischæmum* than to *Elionurus*, but neither in habit nor characters does it approach the *Rottboellieæ*; and is naturally, I think, an *Elionurus*, from other species of which it only differs in the paleate gls. III and IV.

51. CLEISTACHNE, *Benth.*

Tall perennial grasses. *Leaves* long, narrow, flat. *Spikelets* solitary, 1-fld., in an oblong contracted much branched panicle, linear-oblong, terete, hirsute, jointed on the branchlets of the panicle. *Glumes* 4, I and II narrow, rigidly coriaceous, obtuse, completely enveloping III and IV; III much smaller, narrow, hyaline, 2-nerved, margins inflexed ciliate; IV very short, hyaline, with a terminal stout twisted awn; palea minute, hyaline, ciliate. *Lodicules* cuneate, ciliate. *Anthers* 3, large, linear. *Styles* free, stigmas short. *Grain* obovate-oblong, compressed, free.—Species 3, the following and 2 African.

The affinities of this genus and of *Germainia* are with *Anthistiria.*

C. Stocksii, *Hook. f.*; ligule oblong, spikelets dark brown, margins of gl. IV entire, palea ovate obtuse.

Malabar; on the Bababoodan Hills, *Stocks*, *Ritchie*.

Stem tall, stout, simple. *Leaves* 12–16 by ½ in., finely acuminate, softly hairy, midrib stout, margins slightly thickened ciliolate; sheath terete; ligule coriaceous. *Panicle* 6–8 in., long-peduncled, suberect; rachis and branches sparsely ciliate, branchlets (pedicels of spikelets) strigose with bright yellow hairs. *Spikelets* ⅕ in., crowded; callus short, bearded; gl. I dark brown, obscurely many-nerved, hirsute, shining; II like I but narrower, nearly glabrous; III 2-nerved, margins infolded, tip hispid; IV a twisted awn ⅔–1 in. long, dilated at the base into a hyaline 3-nerved membrane embracing the minute palea.—Very closely allied to the African *C. sorghoides*, Benth., which differs in its very short ligule, golden yellow spikelets, usually 2-fid gl. IV, and transversely oblong ciliate palea.

52. **GERMAINIA,** *Balans. & Poitrass.*

Rigid perennial grasses. *Leaves* narrow. *Peduncles* erect, bearing terminal narrowly oblong naked heads of 4 male spikelets, forming an involucriform whorl round a few long-awned females. Male spikelets sessile, 2-fld., glumes 4; I linear-oblong, very coriaceous, truncate, many-nerved, dorsally convex; II rather longer but much narrower, membranous, narrowly lanceolate, 3-nerved; III hyaline, narrowly lanceolate, 1-nerved, diandrous, its palea (if present) as long as itself; IV hyaline, lanceolate, diandrous; palea as long. *Fem. spikelets* much smaller than the male, cylindric, obliquely inserted on a pedicel by an obconical bearded callus; glumes 3, I chartaceous, linear, truncate, convolute round the others; II similar, but shorter; III the long twisted awn which is slightly dilated at the very base; palea short, very broad, tip erose. *Lodicules* 0. *Anthers* 2, very long. *Styles* slender, stigmas long narrow. *Grain* closely wrapped in the glumes.—Species 3 or 4, Indian, African and Chinese.

1. **G. khasiana,** *Hack. in Œstr. Bot. Zeitschr.* xli. (1891) 50; leaves short linear-lanceolate quite glabrous, male spikelets sessile on the contracted tip of the peduncle, gl. I entire retuse or notched.

Khasia Hills; at Nurtiung and Poorung, alt. 4–4500 ft., *Clarke*.

Stems densely tufted, a foot high, erect, leafy, terminating in long slender peduncles. *Leaves* 1-2 in., narrow, acuminate, coriaceous, 1-nerved; ligule hardly any. *Heads* ½–⅔ in. long. *Gl. I* of male fl. polished, tip ciliolate; gl. I of bisexual spikelet scaberulous, tip ciliolate; awn of III 2 in. long.—Very near *G. capitata*, Bal. & Poitr. of China, and probably only a form of that plant, which has rather larger heads and its gl. I has a semicircular retuse tip with a sharp tooth on each side.

2. **G. lanipes,** *Hook. f.*; leaves very long and narrowly linear sheaths at the base of the stem clothed with silvery wool, male spikelets superposed on a very short rachis.

Tenasserim, *Helfer*.

I have examined very scanty material of this curious species, which differs from *G. khasiana* in the short stout rootstock with very thick roots, clothed for an inch or more with snowy wool, and radical leaves a ft. long by ⅛ in. broad.

52.[1] **COELARTHRON,** *Hook. f.*

(Genus not in *Clavis*, p. 5.)

A very slender, straggling, nearly glabrous grass. *Leaves* small, elliptic, acute at both ends. *Spikelets* 1-fld., binate, a sessile bisexual and a minute often imperfect pedicelled, secund and imbricating on the fragile rachis of a solitary erect spike; lowest pair on the spike imperfect; joints of rachis shorter than the sessile spikelet, clavate, tubular, tip truncate open, mouth entire compressed. *Sessile spikelets* dorsally flattened; callus very short, bearded; gl. I ovate-oblong, tip narrowly truncate, dorsally glabrous, with a deep median channel, margins narrowly inflexed above broadly incurved below, keels subpectinately ciliate above the middle; II cymbiform, 1-nerved, awned; III oblong, 1-nerved; IV very small, 2-fid, 3-nerved, awn slender, twisted; palea minute. *Lodicules* 2, cuneate-quadrate. *Stamens* 3. *Styles* 2. *Grain* fusiform. *Pedicelled spikelets* = ½ the sessile or less, male or neuter gls. 2–3, not awned; pedicel linear, flat.

A remarkable grass, differing from *Andropogon* in the secund spikelets, hollow joints of the rachis, deeply channelled gl. I of the sessile spikelet (as in Sect. *Sehima* of *Ischæmum*), and the reduced pedicelled spikelets.

C. Brandisii, *Hook. f. in Hook. Ic. Plant. ined.*

BURMA; high ground, generally with Teak, *Brandis.*

Stems very weak, branching, struggling, rooting at the nodes, white; with ascending filiform 1–2-leaved flowering branches. *Leaves* 1–2 by ⅙–¼ in., inserted on the sheath by a mere point; acute or acuminate at both ends, membranous, flaccid, surfaces and margins quite smooth, midrib and nerves very slender; sheath glabrous; ligule oblong, obtuse. *Spike* 1–1½ in., strict or incurved, quite white. *Sessile spikelets* ⅛ in.; gl. I with a strong median keel on the ventral surface; II notched at the tip, awn as long as the gl. or shorter, very slender, recurved; III flat, ciliate; awn of IV ¾ in., very slender, geniculate, column brown twisted, upper half very pale.

53. ANDROPOGON, *Linn.*

Grasses of various habit. *Leaves* usually narrow, base rarely rounded or cordate. *Inflorescence* of solitary binate digitate fascicled or panicled spikes (which are sometimes reduced to 3 spikelets), rachis articulate, usually fragile. *Spikelets* binate, a sessile fem. or bisexual, and a pedicelled male or neuter. *Sessile spikelet* 1-fld., glumes 4, I dorsally rarely laterally more or less compressed, margins inflexed or incurved, usually keeled; II as long as I, usually laterally compressed, awned or not; III hyaline, empty, 2-nerved or nerveless, epaleate; IV hyaline, broad or narrow, 2-fid and awned in the cleft or reduced to an awn more or less dilated at the base, paleate or not. *Lodicules* cuneate-quadrate. *Stamens* 3. *Stigmas* laterally exserted. *Grain* free. *Pedicelled spikelets* various, gls. 3–4, IV awnless.—Species about 200, chiefly tropical.

In this most difficult genus I have followed Hackel as closely as I could, not venturing to depart far from his grouping of the Indian species, to attempt which with any prospect of success would demand a revision of the whole genus. Hackel's two principal groups (Series), *Isozygi* and *Heterozygi*, unfortunately separate widely subgenera of close affinity in habit and in all other characters, except that adopted to distinguish between these groups. Thus the first two or even 4 subgenera of *Isozygi* are closely related to *Cymbopogon* amongst *Heterozygi*, and not to those that immediately follow them in the series. Added to this, on the one hand the characters drawn from the form, sexuality, &c., of the lower sessile spikelets of the *Heterozygi* as distinguishing them from those of *Isozygi* are often variable and very difficult of detection; and on the other hand the same characters do occur here and there in several subgenera of the latter group. With regard to Hackel's subgenera, they appear to me to be on the whole well constructed and natural, though often depending on characters, some inconstant, others difficult of detection or appreciation. Of the best defined I should, following older authors, have preferred to have treated them as genera, especially *Chrysopogon, Cymbopogon* and *Heteropogon;* and his section *Pseudanthistiria* of subgen. *Hypoginium,* should certainly rank as a genus closely allied to *Anthistiria.* – The following is Hackel's grouping :—

Series I. ISOZYGI. Sessile spikelets of all the pairs alike in sex and form throughout the spikes.

* Peduncle of spikes enclosed in spathiform leaf-sheaths.

† Joints of rachis and pedicels of upper spikelets clavate or trumpet-shaped, top cupular with toothed margins.

§ Spikes solitary on the peduncle.

Pedicelled spikelets smaller than the sessile . . . . 1. SCHIZACHYRIUM.
Peduncled spikelets larger than the sessile . . . . 2. DIECTOMIS.
§§ Spikes 2 or more on the peduncle . . . . . . 3. ARTHROLOPHIS.
†† Joints of rachis and pedicels of upper spikelets slender, top obliquely truncate cupped or not . . . . 4. HYPOGYNIUM.
** Peduncles of spikes not enclosed in spathiform leaf-sheaths ; joints of rachis slender.
Joints of rachis and pedicels of upper spikelets linear compressed with usually a central translucent channel and thickened margins . . . . 5. AMPHILOPHIS.
Joints of rachis very few, filiform, opaque; lodicules ciliate; grain dorsally compressed . . . . 6. SORGHUM.
Joints of rachis many, stout or slender, opaque . . . 7. VETIVERIA.
Joints of rachis few; spikes articulate on the obliquely truncate bearded tips of the branches of the panicle . 8. CHRYSOPOGON.

Series B. HETEROZYGI. Lowest one or more sessile spikelets differing from all those above it in sex or form.

Spikes many (rarely 1 or few) on the peduncle digitate, sessile spikelets dorsally compressed . . . . . 9. DICHANTHIUM.
Spikes binate on the peduncle which is enclosed in a spathiform sheath ; sessile spikelet dorsally compressed . . 10. CYMBOPOGON.
Spikes solitary, lower pairs of spikelets very unlike the upper; upper sessile spikelets cylindric . . . . 11. HETEROPOGON.

Subgen. I. SCHIZACHYRIUM, *Benth. Spikes* solitary; peduncle in a spathiform leaf-sheath ; joints and pedicels clavate or bucciniform, mouths broad cupular irregularly toothed. *Sessile spikelets* dorsally compressed, callus short; gl. I keeled; II not awned ; IV hyaline, 2-fid, awned in the cleft. *Pedicelled spikelets* usually small, imperfect and withering.

* *Annuals.*

1. **A. brevifolius,** *Sw. Prodr. Veg. Ind. Occ.* 26, *Fl. Ind. Occ.* i. 209; glabrous, stems slender straggling much branched leafy, leaves divaricate linear obtuse or subacute, spathes very narrowly linear spreading, spikes glabrous or sparsely hairy. *Kunth Revis. Gram.* ii. 563, t. 196, *Enum. Pl.* i. 488, *Suppl.* 399; *Steud. Syn. Gram.* 366; *Hack. Monogr. Androp.* 363 ; *& in Mart. Fl. Bras.* ii. III. 302; *Benth. Fl. Hongk.* 423; *Duthie Grass. N. W. Ind.* 19, *Fodd. Grass. N. Ind.* 34; *Griseb. Fl. Brit. W. Ind.* 538. A. debilis, *Kunth l. c.* A. flaccidus, *A. Rich. Tent. Fl. Abyss.* ii. 452. A. floridus, *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1833) 265. A. fragilis, *Br. Prodr.* 202; *Kunth Enum. l. c.* A. obtusifolius. *Poir. Encycl. Suppl.* i. 583. A. parviflorus, *Roxb. Fl. Ind.* i. 274. A. tenellus, *Presl Rel. Hænk.* i. 335. Pollinia fragilis & brevifolia, *Spreng, Syst.* i. 288, 289. P. vaginata, *Spreng. Pugill.* ii. 11. Schizachyrium, brevifolium, *Nees Agrost. Bras.* 332.—Andropogon, *Wall. Cat.* n. 8824–5–6. Batratherum, *Wall. l. c.* n. 8827.

TROPICAL HIMALAYA, from Kumaon to Sikkim, BEHAR, CENTRAL INDIA, Chittagong, Burma, the Nicobar Islds., and the Malay Peninsula.—Distrib. Tropics.

Stems 8–24 in., very many from the root, filiform, flaccid, geniculate, leafy throughout. *Leaves* 1–3 in., $\frac{1}{8}$–$\frac{1}{4}$ in. broad, flat, glabrous, margins and nerves beneath scabrid. *Spikes* numerous; peduncle capillary; spathes 1–1$\frac{1}{2}$ in., flat; joints 5–10 as long as the sessile spikelet, and pedicels clavate, tips 2-toothed. *Sessile spikelets* $\frac{1}{8}$ in., linear-oblong; gl. I coriaceous, tip 2-fid; awn $\frac{1}{3}$–$\frac{1}{2}$ in. *Pedicelled spikelet* reduced to a long-awned glume.

2. **A. axilis,** *Hochst. in Flora*, xxvii. (1844) 241; slender, erect, fastigiately branched above, leaves very narrow acuminate, spathe erect narrowly lanceolate, spikes silkily villous. *Hack. Monogr. Androp.* 365. A. fragillimus, *Steud. Syn. Gram.* 384. A. fragilissimus, *Hochst. in Schimp. Pl. Abyss.* n. 2057. A. Petitianus, *A. Rich. Tent. Fl. Abyss.* ii. 451.

Bengal, Chota Nagpore, and the Central Provinces, *Clarke, Duthie*, &c.—Distrib. Afric. trop.

Stems short stout and densely tufted, or lax erect and 12–18 in. high, leafy. *Leaves* 1–3 in., erect, glabrous or sparsely hairy. *Spathes* 1–1$\frac{1}{2}$ in., slender; peduncles $\frac{1}{4}$–1 in., compressed. *Spikes* very slender; joints 8–12, about $\frac{1}{4}$ in. long, silkily ciliate, and pedicels thickened upwards, tips lunate. *Sessile spikelets* as long as the joints, subulate lanceolate; gl. I coriaceous, dorsally silkily villous, tip very slender bifid; II linear-lanceolate, 1-nerved, tip with a short bristle; IV bifid; awn $\frac{1}{3}$–$\frac{2}{3}$ in., very slender. *Pedicelled spikelet* subulate, silky; gl. I shortly awned, whole plant reddish when dry.

** *Perennials.*

3. **A. impressus,** *Hack. in Œstr. Bot. Zeit.* xli. (1891) 49; very slender, sparingly branched, leaves very narrow, joints of spikes 3–5 and pedicels very stout densely ciliate, gl. I of sessile spikelets glabrous lanceolate acuminate, deeply impressed between the scaberulous keels.

N.W. Himalaya; Kishtwar, *Clarke*, alt. 4000 ft.

Perennial. *Stems* erect; flowering branches distant. *Leaves* 4–8 in., setaceously acuminate; sheath short, smooth; ligule rounded. *Spathes* slender. *Spike* about 1 in., scarcely exserted; peduncle glabrous; joints and pedicels subclavate, shorter than the sessile spikelets, densely ciliate, tops obliquely cupped. *Sessile spikelets* $\frac{1}{5}$ in., linear-lanceolate, greenish, callus nearly glabrous; gl. I chartaceous, glabrous, tip 2-toothed, margins rather broadly inflexed; II lanceolate, acute, keeled, 3-nerved scabrid above; III oblong, obtuse, nerveless, ciliolate; IV oblong, cleft to below the middle, lobes glabrous; awn $\frac{1}{2}$–$\frac{5}{8}$ in., very slender, pale. *Pedicelled spikelets* very narrow, gl. I linear-lanceolate, acuminate, purplish, 9–11-nerved; II 3-nerved, acute; III 2-nerved, obtuse; IV 0.—Near *A. Alopecurus*, Hack. (of the Mauritius), which differs in the many-jointed spikes, in the 6–7-nerved gl. I which is more deeply channelled in the middle. The habit is that of a *Cymbopogon.*

4. **A. bootanensis,** *Hook. f.*; tall, stout, leaves very long, joints of spike few and pedicels long-ciliate, gl. I of sessile spikelets glabrous linear-oblong truncate dorsally convex keels obscurely winged above.

Bhotan Himalaya; Tassangsee, alt. 5–6000 ft., *Griffith.*

Perennial. *Leaves* 2–3 ft. narrowly linear, coriaceous, and sheaths smooth and glabrous. *Spike* $\frac{1}{2}$–$\frac{3}{4}$ in., peduncle subexserted from the very narrow spathe; joints and peduncles half as long as the sessile spikelet, rather slender, tips toothed. *Spikelets* red-brown, $\frac{1}{5}$ in.; callus bearded; gl. I nerves obscure; II coriaceous, acute, 1-nerved; III linear-oblong, ciliate, nerveless; IV short, lobes ciliate; awn very slender short; palea minute, ovate. *Pedicelled spikelet* like the sessile.—I have seen but one specimen, it is allied to *A. impressus*, but is a much stouter plant, 3–4 ft. high.

5. **A. hirtiflorus,** *Kunth Revis. Gram.* ii. 569, t. 198, *Enum. Pl.* i. 489; erect, stiff, leaves linear rigid, spathes long-peduncled, spike 2–5 in. glabrous or nearly so, sessile spikelets ¼–⅓ in. narrowly lanceolate. A. Pseudograyia, *Steud. Syn. Gram.* 365; *Hack. Monogr. Androp.* 370. A. zeylanicus, *Arn. ex Benth. Fl. Hongk.* 423; *Thw. Enum. Pl. Zeyl.* 368; *Trim. Cat. Ceyl. Pl.* 107. A. semiberbis, *Kunth Enum. l. c.* Rottboellia sanguinea, *Retz. Obs.* iii. 25. ?Pollinia fulta, *Desv. Opusc.* 69; *Hack. l. c.* 392. Thelepogon sanguineus, *Spreng. Syst.* i. 299. Schizachyrium zeylanicum, *Arn. l. c.* S. hirtiflorum and semiberbe, *Nees. Fl. Afr. Austr.* 334, 336.

KHASIA HILLS, alt. 4–5000 ft., *J. D. H. & T. T.*, *Clarke.* BURMA, *Kurz.* CENTRAL PROVINCES, alt. 3–4000 ft. CEYLON.—DISTRIB. Tonkin, China, Madagascar, Trop. and S. Africa and America.

Perennial. *Stems* tufted, 1–4 ft., simple or sparingly branched upwards, as thick as a crow-quill or less, smooth, shining. *Leaves* chiefly radical, 2–6 in. by ⅛–⅙ in., obtuse acute or acuminate; sheath compressed. *Spathes* 1–2 in., linear-lanceolate, acuminate. *Spike* stout, very narrow, subterete; rachis stout, shining, joints shorter than the sessile spikelets, outer or both margins ciliolate, tip hollowed strongly toothed. *Sessile spikelets* ⅓ in., very narrow, half sunk in the concave faces of the joints; gl. I narrowly lanceolate, bicuspidate, dorsally rounded, faintly 5-nerved; II lanceolate, acuminate, with a gibbous base, and a narrow ciliate dorsal wing above the middle; III linear-oblong, acute, fimbriate; IV lobes narrow, acuminate, awn about ⅓ in. *Pedicelled spikelets,* gl. I flat, subulate, awned, margins inflexed; II short, oblong.—Dr. Stapf has identified the Indian *A. Pseudograyia* with its American and African species cited above, of which I have not given all the synonyms, which will be found in Hackel's Monograph.

Subgen. II. DIECTOMIS, *Hack.* *Spikes* solitary; peduncle in the axil of a spathiform leaf-sheath, joints and pedicels bucciniform, mouths toothed. *Sessile spikelets* laterally compressed, callus short; gl. I accumbent, keeled, II much broader long-awned; IV 2-toothed, awned in the sinus. *Pedicelled spikelet* twice as long and broad as the sessile and concealing it.

6. **A. fastigiatus,** *Sw. Prodr. Veg. Ind. Occ.* 26, *Fl. Ind. Occ.* i. 207; *Hack. Monogr. Androp.* 393; *Griseb. Fl. Brit. W. Ind.* 559. A. diatherus, *Hochst. in Schimp. Pl. Abyss.* n. 2013 (*non Steud.*). A. Hochstetteri, *Steud. Syn. Gram.* 384. Diectomis fastigiata, *H. B. & K. Nov. Gen & Sp.* i. t. 64 (*excl. Syn. Beauv.*); *Kunth in Mem. Mus. Par.* ii. (1815) 69; *Nees Agrost. Bras.* 340 (*non Beauv.*); *Hack. in Mart. Fl. Bras.* ii. II. 303. Pollinia fastigiata, *Spreng. Pugill.* ii. 13. Heteropogon Hochstetteri, *Anderss. in Schweinf. Beitr. Fl. Æthiop.* 310.

BERAR; near Gya and Chota Nagpore, *Clarke, Duthie.* TENASSERIM, *Helfer.*—DISTRIB. Tonkin, China, Afr. and Amer. trop.

Perennial. *Stem* erect 6 in. to 3 ft., or decumbent below and fastigiately branched upwards, leafy. *Leaves* 3–12 in., narrowly linear, acuminate, scabrid; ligule elongate, acute. *Spathes* 2–3 in., linear-lanceolate, often very slender; peduncle variable, tip cupular. *Spikes* solitary, 1–2 in., fragile, joints much shorter than the spikelets, villous with white hairs, tip broad strongly toothed. *Sessile spikelet* ⅙–⅕ in., oblong; callus hairs = ½ the spikelets; gl. I linear-lanceolate, bicuspidate and keeled, margins thickened, ciliate towards the top; II shorter, cymbiform, 2-fid, awned between the short obtuse lobes, dorsally keeled and ciliate above, awn much longer than the spikelets; III linear-oblong, margins ciliate; IV cymbiform, 2-toothed, with a stout dorsal awn from below the tip; palea minute, hyaline. *Pedicelled* *spikelets* neuter; gl. I ovate-lanceolate, twisted, acuminate, 2 cuspidate and awned, ciliate, green, many-nerved; II much smaller, thin, acuminate, awned, III still smaller, oblong, hyaline.—I have examined spikelets of the type of *Homœatherum chinense*, Nees in Hook. & Arn. Bot. Beech. Voy. 239, which is certainly not *Androp. apricus*, as supposed by Hackel, but very close to *A. fastigiatus*, if not the same.

Subgen. III. HYPOGYNIUM, *Hack.* *Spikes* solitary, peduncled in the axil of a spathiform leaf-sheath; joints and pedicels slender, tops obliquely truncate. *Sessile spikelets* dorsally compressed; gl. I with inflexed or involute keeled margins; II keeled, awnless; III hyaline or 0; IV a simple awn (in the Indian species). *Pedicelled spikelets* like the sessile.

Hackel's section *Pseudanthistiria* forms one of the most distinct genera of *Andropogoneæ*, with characters of inflorescence and spikelets totally at variance with his characters of *Hypogynium*. He however observes its affinity with *Anthistiria*, near to which genus I place it.

7. **A. foveolatus,** *Del. Fl. Egypt.* 16a, t. 8, f. 2; densely tufted, basal sheaths silkily villous, spikes 3–6 elongate erect, gl. I of sessile spikelet smooth with usually a deep dorsal pit. *Kunth Enum. Pl.* i. 490; *Hack. Monogr. Androp.* 402; *Duthie Grass. N.W. Ind.* 20, *Fodd. Grass. N. Ind.* 34, t. 21; *Aitchis. Cat. Panjab. Pl.* 176. A. strictus, *Roxb. Fl. Ind.* i. 260. A. Orthos, *Schult. Mant.* ii. 455. A. monostachyus, *Spreng. Pugill.* ii. 9. A. ramosus, *Heyne ex Wall. Cat.* n. 8802.—Andropogon, *Wall. Cat.* 8802.

Drier parts of INDIA, from the Panjab and Sind to Bengal, CHOTA NAGPORE, CENTRAL PROVINCES, CIRCARS and COROMANDEL.—DISTRIB. Westwards to the Cape de Verd Islds.

Stem 1–2 ft., simple or subfastigiately branched above, as thick as a sparrow's quill; nodes sparingly bearded. *Leaves* very narrow, sometimes almost filiform, rigid, scaberulous beneath, sheaths shorter than the internodes, scabrous or glabrous; ligule short, truncate, hyaline, ciliolate. *Spikes* 1–1½ in.; peduncles capillary, erect, usually far exserted beyond the very slender spathe; joints and pedicels slender, villous. *Sessile* and *pedicelled spikelets* subequal ⅛–⅙ in., linear-oblong, subacute, purplish, glabrous except the shortly villous callus, shining; gl. I flat, 4–7-nerved, keels scabrid; II as long, 3-nerved, acute; III much shorter, glabrous, nerveless; IV awn ½–⅔ in. long, very faintly margined towards the base. *Pedicelled spikelet* rufous or purplish, neuter; gls. 2, I subacute, dorsally pitted or not, keels scabrid, 5-nerved, glabrous; II linear-lanceolate, acute, 3-nerved.

8. **A. tuberculatus,** *Hack. Monogr. Androp.* 404; tall, stout, basal sheaths glabrous, spikes solitary long-peduncled erect, gl. I of sessile spikelet lanceolate keels and nerves tubercled not pitted.

CENTRAL PROVINCES; in the Khandua and Betul districts, *Duthie*; Asinagarh, *Kuntze.*

Stem 4–6 ft., stout, stiff, pale yellow, shining, paniculately branched, nodes glabrous. *Leaves* 1–2 ft. by ⅙ in., rather rigid, glaucous, strongly closely nerved, setaceously acuminate, base narrowed, scabrid, midrib very broad; sheath quite smooth; ligule large, membranous, auricled. *Spikes* 1–1¾ in. *Panicle* leafy; spathes very narrow, scabrid with tubercle-based hairs; peduncle 2–4 in., strict, scabrid; joints and pedicels very slender, ciliate with long hairs. *Sessile spikelets* ⅕ in., linear-lanceolate, callus shortly bearded; gl. I lanceolate, tip narrowly truncate, dorsally flat, 3–7-nerved, margins narrowly inflexed, keels and nerves tuberculate; II membranous, lanceolate, acute, 1-nerved, ciliate; III linear, acute, glabrous; IV awn $\frac{1}{2}$–$\frac{2}{3}$ in. *Pedicelled spikelets* male, gl. I strongly nerved; IV 0.—A very handsome grass.

Subgen. IV. ARTHROLOPHIS. *Spikes* 2-nate digitate or subpaniculate, on a common peduncle arising from a spathiform sheath; joints few or many, clavate or bucciniform (slender in *A. tristis*), tips cupular with toothed margins. *Sessile spikelets* dorsally compressed; gl. I not awned, margins inflexed, keeled; II dorsally keeled, awned or not; III hyaline; IV small, 2-fid with an interposed awn, or reduced to a simple awn. *Pedicelled spikelets* usually unlike the sessile; gl. I awned or not.—A heterogeneous assemblage.

* Joints of spikes and pedicels of upper spikelets rather slender; gl. II of sessile spikelet not awned.

9. **A. tristis,** *Nees ex Hack. Monogr. Androp.* 439; spikes 3–6 unequal stipitate or subsessile on the peduncle, gl. I of sessile spikelet lanceolate deeply depressed between the thickened sides, IV very narrow 2-fid.

TEMPERATE WESTERN HIMALAYA, alt. 8–1000 ft., from Kashmir to Garwhal.

Stems 2–3 ft., compressed, tufted on a stout short or creeping rootstock, slender or rather stout, erect or geniculate below, branching above; nodes glabrous. *Leaves* 6–10 by $\frac{1}{3}$–$\frac{1}{8}$ in., narrowly linear, scaberulous, rather rigid, hairy at the base; lower sheaths broad, compressed; ligule oblong, membranous. *Spikes* 1–3 in., livid green; peduncle 2–6 in., spathe very narrow; joints and pedicels = $\frac{3}{4}$ the sessile spikelet, hardly clavate, shortly ciliate. *Spikelets* loosely imbricate, sessile $\frac{1}{4}$ in., very narrow; callus hairs very short; gl. I more or less scaberulous margins broadly inflexed; II narrowly oblong, apiculate, ciliate, keel subscaberulous; III lanceolate, 2-nerved, ciliate; IV awn short or 0; palea minute, quadrate. *Pedicelled spikelets* as long as the sessile, gl. I 3–7-nerved; II 1–5-nerved; III hyaline; IV 2-fid and mucronate or 0, paleate or not.

** Joints of spikes and pedicels of upper spikelets clavate or bucciniform.

† *Gl. II of sessile spikelets awned.*

10. **A. apricus,** *Trin. in Mem. Acad. Petersb. Ser.* VI. iv. (1836) 83; tall, slender, leaves very narrow, spikes 2–5 hispidulous, joints and pedicels bucciniform, gl. I of sessile spikelets linear 2-cuspidate or 2-aristulate, II long-awned, IV bifid awned between the ciliate lobes. *Hack. in Mart. Fl. Bras.* ii. II 304. A. apricus *var.* indicus, *Hack. Monogr. Androp.* 457. A. ascinodis, *Clarke in Journ. Linn. Soc.* xxv. (1889) 87, t. 36.

KHASIA HILLS, alt. 2–3500 ft., *J. D. H. & T. T.* (*Herb. Ind. Or. Androp.* n. 4). MUNNEPORE; on Jackpho, alt. 7500 ft., *Clarke*. PEGU; in the Eng forest, *Kurz*.—DISTRIB. Trop. Africa and America.

Stem 3–5 ft., strict, sparingly branched upwards, quite smooth, nodes glabrous. *Leaves* 1–3 ft. by $\frac{1}{8}$–$\frac{1}{6}$ in., erect, coriaceous, glabrous except a few hairs at the base; sheaths very long, narrow, upper spathiform, very slender, tips setaceous, lower open; ligule oblong, obtuse, chartaceous. *Inflorescence* subpanicled; peduncle 2–4 in., filiform, puberulous, sheathed almost up to the spikes. *Spikes* $\frac{1}{2}$–1 in., very unequal in each fascicle, very shortly stipitate, hairs or cilia rigid setiform brownish, joints and pedicels half as long and as broad as the sessile spikelets, cuneately campanulate, base narrow, dorsally rounded, glabrous or scaberulous, sides ciliate with long hairs. *Sessile spikelets* $\frac{1}{6}$–$\frac{1}{5}$ in.; callus conical, rigidly bearded; gl. I deeply channelled dorsally, keels scabrid above the middle, thickened below, nerves 2-nate at the keels; II 1-nerved, margins ciliate, keel setulose at the top, tip 2-fid, awn as long as itself; III linear, hyaline, broadly ciliate; IV shorter, oblong, 1-nerved;

awn 1 in. slender; palea small, linear-oblong, ciliate. *Pedicelled spikelets* narrower and rather smaller than the sessile, purplish; gl. I ovate-lanceolate, 2-cuspidate, keels long ciliate above the middle; II and III as in the sessile spikelet.—According to Hackel the Indian plant differs from the African in the longer hairs of the joints and pedicels and in the more exserted peduncle of the spikes, but I find that these and other minute characters are very inconstant. Homœatherum chinense, *Nees*, included under *A. apricus*, is, I think, certainly *A. fastigiatus.*

11. **A. longipes,** *Hack. in Flora* (1885) 138; annual, stem slender ascending, leaves linear and sheaths sparsely hirsute, spikes 2 both stipitate, peduncle naked (spathe 0), joints many and pedicels rather stout subclavate tips cupped shortly ciliate, sessile spikelets $\frac{1}{3}$ in. dorsally compressed oblong-lanceolate, gl. I broadly unequally winged above the middle aristulate, II long-awned, IV obovate cleft to the middle, awned between the lobes.

NILGHIRI HILLS, *Perrottet.*

Stems 12–16 in., decumbent below, nodes glabrous. *Leaves* 4–6 by $\frac{1}{8}$–$\frac{1}{5}$ in., hairs tubercle-based; ligule very short. *Spikes* 2–3 in., rather stout, dense-fld., green; joints and pedicels = $\frac{1}{2}$ the sessile spikelet, concavo-convex, margins rounded. *Spikelets* imbricating, callus short, obtuse, bearded; gl. I dorsally sparsely hairy and depressed or convex, many-nerved, wing produced beyond the summit serrulate; II ciliate, 3-nerved, lateral nerves submarginal, tip 2-toothed, keel scaberulous, awn as long as the gl.; III hyaline, 2-nerved, copiously ciliate; IV as long as III; lobes lanceolate, acuminate; awn $\frac{3}{4}$ in., glabrous. *Pedicelled spikelets* as long as the sessile, male; gl. I shortly awned, 6-7-nerved; II membranous, 3-nerved; III and IV linear-oblong, ciliate.—I have seen only one specimen. This, I think, is a doubtful member of the subgenus, the peduncle not arising from a distinct flattened spathe.

†† *Glume II of sessile spikelets not awned.*

12. **A. pumilus,** *Roxb. Fl. Ind.* i. 273; stem paniculately branched, leaves narrow, spikes in pairs, joints and pedicels clavate or trumpet-shaped, sessile spikelets dorsally compressed, gl. I very narrow lanceolate deeply channelled between the thickened keels, IV very narrow bisetose. *Kunth Enum. Pl.* i. 492; *Steud. Syn. Gram.* 388. A. demissus, *Steud. l. c.* A. geminatus, *Herb. Russ. ex Wall. Cat.* n. 8798 C. A. humilis, *Wight Cat.* n. 1701. A. caesius *a*, *Nees ex Wight l. c. n.* 1700. A. hirtus, *Heyne in Herb. Roth.* A. pachyarthrus, *Hack. Monogr. Androp.* 449; *Duthie Grass. N.W. Ind.* 21, *Fodd. Grass. N. Ind.* t. 39.—Andropogon, *Wall. Cat.* n. 8798, A. B. C., 8799.

Drier parts of INDIA. NEPAL, *Wallich, &c.*; from Banda in RAJPOOTANA, and Surat to the CENTRAL PROVINCES and COROMANDEL.

Annual or perennial? *Stem* 6–18 in. high, slender, suberect or geniculate and decumbent below; nodes glabrous. *Leaves* 3–5 in., rarely $\frac{1}{6}$ in. broad, sometimes almost filiform, acuminate, glabrous; sheath compressed, keeled; ligule short, truncate. *Spikes* $\frac{1}{2}$–$\frac{2}{3}$ in., in pairs terminating a very slender peduncle which arises from a narrow flattened glabrous spathe $\frac{1}{4}$–$\frac{1}{2}$ in. long; joints 6–8 and pedicels shortly ciliate on one margin, tops dilated cupped with 2–3-toothed margins. *Sessile spikelets* $\frac{1}{6}$ in.; callus glabrous; gl. I membranous, acuminate, bicuspidate, lateral ribs often ending below in 2 tubercles; II as long, narrowly lanceolate, mucronate, coriaceous; III shorter, linear, hyaline, 2-nerved; IV very narrow, cleft into two capillary-lobes with an interposed capillary awn $\frac{1}{6}$–$\frac{1}{3}$ in. long; palea minute, oblong. *Pedicelled spikelets* $\frac{1}{6}$–$\frac{1}{4}$ in., ovate-lanceolate, acuminate, 5-nerved; gls. 3. —An excellent figure amongst Roxburgh's drawings attests Hackel's *A. pachyarthrus* being *A. pumilus.* The peduncle of the spike is sometimes 2 in. long. Wallich's n. 8799 is very tall and slender, as if drawn up amongst other plants.

13. **A. Munroi,** *Clarke in Journ. Linn. Soc.* xxv. (1889) 87, t. 37 (*char. reform.*); tall, slender, leaves very narrow, spikes in a small open subsimple panicle terminating solitary capillary sheathed peduncles, joints and pedicels clavate shortly silkily ciliate, sessile spikelets lanceolate, gl. I acuminate deeply hollowed between the thickened keels, IV very narrow bisetose.

NORTH MUNNEPORE, alt. 3500 ft., *Clarke.*

Stem 2–3 ft., sparingly branched upwards, slightly compressed, nodes glabrous. *Leaves* 6–10 by $\frac{1}{10}$ in., rather coriaceous, smooth, glabrous, nerves close-set, glaucous beneath with prominent midrib; sheath terete, smooth keeled; ligule rather long. *Spathe* 1–$2\frac{1}{2}$ in., very slender, terete, acuminate. *Panicle* 1–$1\frac{1}{2}$ in., as broad as long, of few irregular spreading branches. *Spikes* 4–8, $\frac{1}{4}$–$\frac{3}{4}$ in. long, very shortly stipitate, solitary or 2–3-nate, divaricate or drooping, peduncle and pedicels of spikes smooth, glabrous; joints and pedicels of upper spikelets with irregularly toothed cupular tips; lowest pair of spikelets sometimes imperfect or male. *Spikelets* 4–6 pairs, $\frac{1}{6}$ in. long, laxly imbricating; sessile, callus shortly softly bearded; gl. I coriaceous, glabrous, shining, margins incurved, keels minutely scaberulous, nerves 0, or one vanishing below the middle; II acuminate, 3-nerved, keel ciliolate above the middle; III hyaline, ovate-oblong, 2-nerved, glabrous; IV as long as III, lobes subulate, awn $\frac{1}{4}$–$\frac{2}{3}$ in., capillary; palea minute, truncate. *Pedicelled spikelets* male, gl. I linear-oblong, convex, subacute, 7–9-nerved; III acuminate, 3-nerved, glabrous; III as in the sessile spikelets; IV lanceolate.—The figure in Journ. Linn. Soc. gives the habit of the plant, but the description and analysis are very wrong. The former also errs in citing *Androp.* No. 4, Herb. Ind. or Hf. & T. under *A. Munroi*, it is *A. apricus.*

Subgen. V. AMPHILOPHIS, *Trin.* *Spikes* 2 or more fascicled or panicled, with many or few joints; joints and pedicels of upper spikelets narrow, linear, flattened, usually channelled and translucent between the thickened sides along the mesial line, terete and opaque in 21. *A. concanensis*, 27. *fascicularis*, and 28. *venustus*, tips simply truncate. *Sessile spikelets* dorsally compressed; callus short; gl. I acutely 2-keeled; II keeled, awnless; III hyaline, epaleate; IV an awn with the base acute or very rarely dilated and 2-toothed or 2-fid. *Pedicelled spikelets* usually as long as the sessile, but narrower, many-nerved, and male.

A. Spikes with many pairs of spikelets.

* Pedicels of upper spikelets and joints of rachis slender, strongly compressed, with thickened margins and translucent centre.

† Spikes digitate or fascicled, not panicled, lower longer than the rachis of the inflorescence. (See also 24. *A. intermedius.*)

§ *Glume I of sessile spikelets more or less villous below the middle.* (*See also* 19. A. pertusus.)

14. **A. Ischæmum,** *Linn. Sp. Pl.* 1047; leaves narrowly linear, sheaths compressed, spikes 3–20 slender silky rachis glabrous, sessile spikelets $\frac{1}{8}$–$\frac{1}{5}$ in., callus shortly bearded, gl. I oblong minutely truncate not pitted 5–7-nerved more or less appressedly hairy below the middle, keels rigidly ciliate. *Kunth Enum. Pl.* i. 499; *Host Gram. Austr.* ii. 3, t. 3; *Reichb. Ic. Fl. Germ.* t. 54; *Nees Gen. Fl. Germ. Monocot.* i. t. 92; *Steud. Syn. Gram.* 379; *Hack. Monogr. Androp.* 474; *Aitchis. Cat. Panjab Pl.* 176; *Duthie Grass. N.W. Ind.* 20, *Fodd. Grass. N. Ind.* 35, t. 23; *Benth. Fl. Austral.* vii. 531. A. angustifolius, *Sibth. & Sm. Prodr. Fl. Græc.* i. 47. A. annulatus, *F. Schmidt Fl. Cap. Verd.* 157. A. radicans,

Lehm. Ind. Sem. Hort. Hamb. 1828; *Nees Fl. Afr. Austr.* 106. A. villosus, *a*, *Lamk. Fl. Fr.* iii. 364.

NORTH WEST INDIA, from Kashmir and West Tibet to Kunawur, ascending to 12,000 ft.—DISTRIB. Westward to S. Europe, and tropics generally or sporadically.

Stems 2–3 ft., erect or geniculately ascending, subsimple, naked above; nodes naked or shortly bearded. *Leaves* 1–2 ft. by $\frac{1}{16}$–$\frac{1}{6}$ in., glabrous or hairy above, especially towards the base, glaucous, scaberulous above, base rounded; sheath loose; ligule very short. *Spikes* unequal, $1\frac{1}{2}$–3 in., shortly stipitate, usually purplish. *Sessile spikelets*, gl. I dorsally flat; II lanceolate, mucronulate, keels scabrid above; III oblong-lanceolate, acute, ciliate; IV awn $\frac{1}{2}$–$\frac{3}{4}$ in. *Pedicelled spikelets* usually darker than the sessile, male; gl. I lanceolate, 9-nerved, glabrous, keels ciliate above; II linear-lanceolate, 5–7-nerved; III linear-oblong, obtuse, ciliate; IV very narrow.

15. **A. Pseudischæmum,** *Nees ex Steud. Syn. Gram.* 380; tall, nodes bearded, leaves narrow pruinose beneath, sheaths terete, spikes 4–6 stipitate slender flexuous, rachis smooth, joints and pedicels a little shorter than the spikelets silky, sessile spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. lanceolate, callus hairs very short, gl. I imperforate sparsely silkily villous below the middle 7–9-nerved, keels ciliate. *Hack. Monogr. Androp.* 477. A. annulatus & quinqueflorus, *Heyne in Herb. Rottl.* A. Ischæmum, *Roxb. Fl. Ind.* i. 264. A. oryzetorum, *Hack. l. c.* A. pentastachyus & undulatus, *Heyne ex Wall. Cat.* n. 8815 A. A. scandens, *Thw. Enum. Pl. Zeyl.* 368 (*non Roxb.*); *Trim. Cat. Ceyl. Pl.* 107.

The DECCAN PENINSULA, *Heyne*, &c. COROMANDEL, *Roxburgh.* CEYLON, *Thwaites.*

Stem 2–3 ft., terete glabrous. *Leaves* 6–10 by $\frac{1}{6}$–$\frac{1}{3}$ in., glabrous or fimbriate with long hairs towards the base, upper surface and margins scabrid, lower glaucously pruinose, lateral nerves prominent; upper margins of the sheath membranous; ligule very short, ovate, membranous. *Spikes* flexuous or erect, 2–4 in. long, dull green, subracemose, common rachis smooth, axils bearded, special peduncles $\frac{1}{4}$–$\frac{1}{2}$ in.; joints and pedicels slender. *Sessile spikelets* $\frac{1}{7}$–$\frac{1}{5}$ in.; gl. I minutely truncate, tip hyaline, keels closely ciliolate and with a few long marginal hairs; II ciliate, 3-nerved; III hyaline, oblong, ciliate, 2-nerved or nerveless; IV awn $\frac{1}{2}$–$\frac{2}{3}$ in., base obscurely dilated, palea 0. *Pedicelled spikelets* longer than the sessile, lanceolate, gl. I 9-nerved, glabrous dorsally, keels scaberulous and ciliate; II 5–7-nerved; III ovate-oblong; IV minute or 0.—The spikelets vary a good deal in size. The pruinose undersurface of the leaves is a very marked character. Roxburgh's figure of his *A. Ischæmum* has awns an inch long, but allowance must be made for native artists' work. I have seen only a single specimen of *A. oryzetorum*, the spikes are very long and flexuous. Hackel distinguishes it from *Pseudischæmum* by the leaves being scabrous on both surfaces, which they are not in the specimen I have examined.

16. **A. compressus**, *Hook. f.*; stem tall robust compressed, nodes glabrous, leaves long broad flat, sheaths compressed keeled, spikes very many densely subcorymbosely panicled pale flexuous silky, joints and pedicels very slender, sessile spikelets $\frac{1}{6}$ in. ovate-lanceolate, callus hairs = $\frac{1}{3}$–$\frac{1}{2}$ the spikelet, gl. I imperforate 5–7-nerved villous below the middle, keels minutely scabrid.

The DECCAN, *Lisboa* (No. 6. *A. odoratus*), *Woodrow.*

Stem 3–4 ft., as thick as a goose-quill at the base, erect, sparingly branched, leafy. *Leaves* 1–$1\frac{1}{2}$ ft. by $\frac{1}{4}$–$\frac{1}{3}$ in., finely acuminate, slightly scaberulous on the margins and both surfaces, a little hairy towards the base; sheaths strongly compressed and acutely keeled, uppermost forming a lanceolate spathe 4–6 in. long to the base of the panicle; ligule a ciliate membrane. *Fascicles of spikes* 4–5 in. long, erect, branches slender, lowermost ½ in. long, and rachis smooth. *Spikes* 1–2 in. branched at the base, firm, nearly white, callus-hairs ⅓ the length of the spikelet. *Sessile spikelets*, joints and pedicels about = ½ spikelet, centre hyaline, upper hairs reaching the top of the sessile spikelet; gl. I, thin, margin narrowly incurved, tip truncate, hyaline; II ovate, 1-nerved, tip hyaline; III shorter, ovate obtuse glabrous nerveless; IV awn about ⅓ in., inconspicuously margined below. *Pedicelled spikelets* narrower than the sessile, hairs of callus half their length; gl. I 9–11-nerved; II 3-nerved; III oblong, long-ciliate, nerveless.—Sent by Lisboa as *A. odoratus*, but apparently very different from the description of that plant and from the specimens received in the strongly compressed and acutely keeled sheaths, broad leaves and inflorescence.

17. **A. Woodrovii,** *Hook. f.*; stems tall erect compressed, nodes glabrous, leaves long, sheaths compressed, spikes erect stipitate fascicled strict silky, joints and pedicels slender ciliate with long erect hairs, sessile spikelets ⅛–⅙ in. oblong-lanceolate, callus hairs = ¼ of the spikelet, gl. I of sessile spikelet 8–12-nerved silky below the middle, tip truncate hyaline, keels ciliolate.

BOMBAY; Mawal, *Woodrow* (*Herb. Bombay*, n. 27).

Stems 3–4 ft., tufted on a woody rootstock, thicker than a goose-quill at the base and obtusely 2-edged, solid, stiff, branched above. *Leaves* 1–2 ft. by ⅛–⅙ in., rigid, surfaces and margins scaberulous, not pruinose beneath; sheath loose, keeled, quite smooth; ligule a truncate ciliate membrane. *Spikes* 3–5, ½–1 in. long, pale, on slender but stiff smooth proper peduncles, ⅓–½ in. long; joints and pedicels linear, margins silky, upper hairs half as long as the spikelet. *Sessile spikelets*, callus rather long, obtuse; gl. I coriaceous, glabrous above the middle, margins narrowly incurved, nerves slender; II chartaceous, 3-nerved, ciliate; III ovate, acute, nerveless, glabrous; IV a simple awn ½–⅔ in. *Pedicelled spikelets* narrower than the sessile; gl. I 9-nerved, glabrous, keels scabrid; II 3-nerved, ciliate; III obovate, ciliate, nerveless; IV 0.—Apparently a very distinct species, of which better specimens are much wanted, the spikes being much broken. Mr. Woodrow observes that the odour is that of camphor.

§§ *Glume I of sessile spikelets usually quite glabrous (or hairy below the middle in* A. pertusus).

18. **A. pertusus,** *Willd. Sp. Pl.* iv. 922; erect or ascending, nodes more or less bearded, leaves linear, sheaths terete, spikes 3–7 usually purple 1–2 in. digitately fascicled shortly stipitate slender silky, rachis fragile, joints and pedicels silkily ciliate, sessile spikelets ⅐–⅕ in. oblong-lanceolate minutely truncate usually shining glabrous or sparsely hairy below the middle 5–9-nerved usually 1–2-pitted dorsally callus shortly bearded, keels spinulosely ciliate above. *Beauv. Agrost.* 131, t. 23, f. 2; *Br. Prodr. Fl. Austral.* 201; *Roxb. Fl. Ind.* i. 258; *Kunth Enum. Pl.* i. 498; *Steud. Syn. Gram.* 364; *Hack. Monogr. Androp.* 479; *Wight Cat.* n. 1696; *Thw. Enum. Pl. Zeyl.* 367 (*excl. Syn.*) 437; *Trim. Cat. Ceyl. Pl.* 108; *Aitchis. Cat. Panjab. Pl.* 176 (*excl. Syn.*); *Duthie Grass. N.W. Ind.* 21 (*excl. Syn*), *Fodd. Grass. N. Ind.* 38, t. 25; *Lisboa in Bomb. Journ. Nat. Hist.* vi. (1891), 202; *Nees Fl. Afr. Austr.* 107; *Benth. Fl. Austral.* vii. 530; *Baker Fl. Maurit.* 445 (*excl. some Syns.*); *Boiss. Fl. Orient.* v. 464. A. angustifolius, *Parl. Fl. Palerm.* i. 269. A. panormitanus, *Parl. Fl. Ital.* i. 140. A. punctatus, *Aitchis. in Journ Linn. Soc.* xviii. (1881) 111 (*not of Roxb.*). Lepeocercis pertusa, *Hassk. Pl. Jav. Rar.* 52. Eleonurus pertusus, *Nees mss. ex Steud. l. c.* Holcus pertusus, *Linn. Mant.* ii. 301.—Andropogon, *Wall. Cat.* n. 8804 A. B. C. D.

Drier parts of INDIA; from the Panjab to Burma, and southward to CEYLON.—DISTRIB. Westwards to Sicily; trop. Asia, Africa, and Australia.

Very variable in habit and stature, rarely 12 in. high, tufted, annual or perennial; stem sometimes creeping and rooting, usually ascending from a leafy base, slender, even filiform; nodes sometimes densely bearded. *Leaves* 2–12 by $\frac{1}{12}$–$\frac{1}{8}$ in., acute or acuminate, glabrous except at the ciliate base, rarely hairy, surfaces scaberulous, dull green; sheath hardly compressed, glabrous or villous; ligule short, membranous, truncate. *Spikes* pale or purplish; joints and pedicels very slender = $\frac{1}{2}$ the sessile spikelet; gl. I of sessile spikelet subacute, coriaceous; II 1–3-nerved; III linear-oblong, obtuse, glabrous; IV, awn $\frac{1}{2}$–$\frac{3}{4}$ in., capillary, base slightly dilated; palea minute or 0. *Pedicelled spikelets* like the sessile, male or neuter; gl. I 7–13-nerved, glabrous, pitted or not, keels ciliolate throughout their length; II lanceolate, 5-nerved, ciliate; III linear-oblong, glabrous; IV short or 0.—Lisboa describes the spikelets as aromatic when crushed. Hackel has the following Indian varieties, all of which, except *longifolius*, are united by various intermediates.

α. *genuinus*; gl. I thin not shining more or less villous below the middle, spikes 3–9.—Common.

β. *Wightii*; sheaths villous, nodes long bearded, spikes about 15.—"Panvanasum," *Wight Cat.* n. 1696.

ε. *longifolius*; tall, erect, stout from a woody stock, 2–4 ft. high, nodes densely bearded, leaves 12–18 by $\frac{1}{4}$ in. hairy, sheaths hirsute, lower spikes branched, spikelets quite glabrous, gl. I of lower spikelet coriaceous. A. Arnottianus, *Nees in Wight Cat.* n. 2338.—Andropogon, *Wall. Cat.* n. 8803.—Ceylon? *Wight.*—A very different looking plant from the other forms of *A. pertusus.*

η. *insculptus*; sheaths glabrous, gl. I of sessile spikelets 1–2-pitted truncate, keels longer ciliate. A. insculptus, *A. Rich. Tent. Fl. Abyss.* ii. 458. A. bifoveolatus & subunifoveolatus, *Steud. Syn. Gram.* 380.—Not uncommon.

19. **A. Foulkesii,** *Hook. f.*; stem erect or ascending very slender, nodes glabrous, leaves narrowly linear, sheaths terete, spikes 3–6 1–1$\frac{1}{2}$ in. long digitately fascicled long-stipitate slender purplish, joints and pedicels shortly ciliate, sessile spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. oblong-lanceolate dorsally depressed in the middle line imperforate 7-nerved glabrous keels pectinately ciliate.

NILGHIRI HILLS, *Wight*; Kaity, *Foulkes*; Pykora, *King.*

Perennial. *Stem* 12–18 in. *Leaves* 6–10 by $\frac{1}{6}$–$\frac{1}{4}$ in., finely acuminate, glabrous or hispid on both surfaces with spreading hairs, midrib very strong; sheath glabrous, mouth and ligule villous with long hairs. *Spikes* 1–1$\frac{1}{2}$ in., special peduncles $\frac{1}{4}$–1 in., very slender, axils bearded with long soft hairs; joints and pedicels slender, flat with thickened margins and diaphanous centre. *Sessile spikelets* $\frac{1}{6}$–$\frac{1}{5}$ in., tip 2-toothed, callus bearded; gl. I dorsally flattened or convex, nerves obscure or distinct; II acuminate, 3-nerved, keel scaberulous above, margins ciliate; III shorter, lanceolate, nerveless; IV awn $\frac{1}{2}$–$\frac{2}{3}$ in., capillary, palea 0. *Pedicelled spikelet* longer and narrower than the sessile; gl. I strongly 9-nerved.—Resembles *A. Ischæmum,* differing in the much shorter hairs of the joints and pedicels and glabrous spikelets.

20. **A. concanensis,** *Hook. f.*; slender, erect, leafy, leaves very narrow sheaths terete, nodes glabrous, spikes 5–8 2–2$\frac{1}{2}$ in. long loosely fascicled long-stipitate slender flexuous pale, joints and pedicels slender compressed not deeply sulcate sparsely shortly ciliate, spikelets $\frac{1}{8}$ in. ovate- or oblong-lanceolate narrowly truncate glabrous 7-nerved keels very shortly ciliate.

BOMBAY, *Woodrow* (*Herb. Bomb.* n. 28).

Perennial. *Stems* many from a nodose stock, 28–24 in., firm, smooth, terete, leafy. *Leaves* 8–10 by $\frac{1}{12}$–$\frac{1}{8}$ in., finely acuminate, smooth on both surfaces; sheaths smooth; ligule a ridge. *Spikes* very pale, rachis and proper peduncles filiform, glabrous, the latter $\frac{1}{2}$–$\frac{3}{4}$ in. long, axils slightly bearded; joints and pedicels = $\frac{1}{2}$ the lower spikelet, compressed, hardly grooved and not translucent in the centre, sides not thickened. *Sessile spikelets* small, callus hairs = $\frac{1}{4}$ the gls.; gl. I thin, nerves very slender, keels ciliate with stiff very short bristles; II lanceolate, acuminate, ciliate, nerves 3 faint; III much smaller, oblong, obtuse, nerveless; IV, awn $\frac{1}{2}$ in., capillary, base slightly dilated. *Pedicelled spikelets* narrower than the sessile, gl. I 9-nerved; II and III as in the sessile; IV small, oblong, often unequally 2-fid, ciliate, nerveless.—Although the pedicels of the upper spikelets and joints of the rachis are not as in typical *Amphilophis*, this appears to be the position of *A. concanensis.*

21. **A. Kuntzeanus,** *Hack. Monogr. Androp.* 478; tall, nodes thickly bearded, leaves narrowly linear smooth, sheaths terete glabrous, spikes 12–15 $\frac{3}{4}$–2 in. long densely fascicled slender silky purplish, joints and pedicels plumosely ciliate with long hairs, sessile spikelets $\frac{1}{5}$ in. linear-lanceolate, callus hairs = $\frac{1}{2}$ the spikelets, gl. I pitted or not 7–9-nerved keels subpectinately ciliate towards the 2-toothed tip.

The CONCAN and CENTRAL PROVINCES, *Kuntze, Duthie.*

Stem 3–5 ft., as thick as a goose-quill below, with 2–3 slender flowering branches above, terete, smooth. *Leaves* 10 in. and upwards by $\frac{1}{6}$–$\frac{1}{4}$ in., glabrous, glaucous, smooth, margins scaberulous, upper cauline short, rigid. *Spikes* corymbose, slender, flexuous, proper peduncles $\frac{1}{4}$–$\frac{1}{3}$ in., slender, glabrous; joints and pedicels = $\frac{1}{2}$ the lower spikelet or more, translucent in the middle line. *Sessile spikelets* narrow; gl. I quite glabrous, thin; II lanceolate, acuminate or mucronate, margins ciliolate; III lanceolate, glabrous; IV awn about $\frac{1}{2}$ in., base somewhat dilated. *Pedicelled spikelets* narrower than the sessile, male; gl. I strongly 9–11-nerved, keels ciliate scabrid at the entire tip; II 5-nerved; III ovate-oblong ciliate, nerveless; IV small, linear, or 0.

22. **A. ensiformis,** *Hook. f.*; stem erect stout compressed, nodes glabrous, leaves erect strict narrowly ensiform acuminate, sheath strongly compressed, spikes many in a thyrsiform fascicle shortly stipitate, joints and pedicels silky with long hairs, sessile spikelets $\frac{1}{5}$ in. ovate-oblong, callus hairs = $\frac{1}{2}$ the spikelet, gl. I membranous dorsally flat 5–7-nerved very sparsely silkily villous towards the base, tip truncate keels minutely ciliate.

The CONCAN? *Dalzell.*

Stems 2 ft. and upwards, densely tufted, base as thick as the thumb, with stout roots, clothed with the compressed equitant leaf-sheaths. *Leaves* 8–10 by $\frac{1}{3}$–$\frac{1}{2}$ in., rigid, strongly nerved, glabrous or sparsely hairy, tips acicular, margins and both surfaces scaberulous; sheaths smooth, lower equitant; ligule short, scarious. *Spikes* $\frac{1}{2}$–$\frac{2}{3}$ in., in an erect narrow thyrsus 3 in. long, pale purplish, proper peduncles $\frac{1}{6}$–$\frac{1}{4}$ in.; joints and pedicels very slender, flat with a translucent channel, ciliate with very long erect hairs. *Sessile spikelets*, callus small; gl. I thin, shining, margins rather narrowly incurved, keels slender; II ovate-oblong, acute, 3-nerved, ciliate, not keeled; III narrowly oblong, ciliate; IV a very narrow entire or 2-toothed membranous dilatation of the base of the slender awn, which is $\frac{1}{2}$–$\frac{2}{3}$ in. long. *Pedicelled spikelets* as long as the sessile, linear-oblong; callus naked; gl. I convex, many-nerved; II 5-nerved; III linear-oblong, ciliolate; IV 0.—I have seen only a single specimen from the Herbarium of the late Mr. A. Dalzell, with no locality marked. The straight sword-shaped leaves are remarkable.

†† Spikes racemed or panicled, lower much shorter than the rachis of the inflorescence.

23. **A. intermedius,** *Br. Prodr.* 20; inodorous, tall, leaves narrowly

linear, sheaths terete, rachis and branches of panicle glabrous, spikes fragile, joints and pedicels slender densely ciliate, sessile spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. oblong-lanceolate acute, callus hairs very short, gl. I of sessile spikelets glabrous or sparsely hairy or hispid below pitted or not, keels scabrid towards the tip. *Kunth Enum. Pl.* i. 500; *Steud. Syn. Gram.* 392; *Hack. Monogr. Androp.* 485; *Lisboa in Bomb. Journ. Nat. Hist.* iv. (1889), & vi. (1891) 69, 202. A. pertusus, *Thw. Enum. Pl. Zeyl.* 367 (*in part*). ? A. Pseudischæmum, *Duthie Grass. N.W. Ind.* 21, *Fodd. Grass. N. Ind.* 88. A. fascicularis, *Thw. l. c.* 437; *Trim. Cat. Ceyl. Pl.* 108; *Benth. Fl. Austral.* vii. 531. Holcus montanus, *Herb. Ham. ex Wall. Cat.* n. 8805 C.—Andropogon, *Wall. Cat.* n. 8804 E, 8805, 8806, 8815 C.

Throughout INDIA, from the Panjab (ascending the Western Himalaya to 8000 ft.) to Bengal and Arracan and southward to CEYLON.—DISTRIB. Westward to the Caucasus, China, Malaya, and the Pacific. Trop. Africa.

Perennial. *Stem* 3–5 ft., stout or slender, slightly flattened on one side; nodes glabrous or hairy. *Leaves* 6–18 by $\frac{1}{6}$–$\frac{1}{3}$ in., flat, glaucous, setaceously acuminate, ciliate towards the base; sheath hairy at the top; ligule very short, truncate. *Panicle* very variable in form and density, pyramidal thyrsiform or subcorymbose, rachis and branches glabrous the latter usually in opposite pairs; spikes variable in length. *Spikelets* pale green or purplish; gl. I rather thin, obtuse or narrowly truncate, 4-7-nerved; II oblong or lanceolate, 3-nerved, keel smooth, margins glabrous; III = $\frac{1}{2}$ I, oblong, glabrous, nerveless; IV a slender awn, 1–1$\frac{1}{2}$ in. long, palea 0.—*Pedicelled spikelets* linear-oblong or -lanceolate; gl. I 5–9-nerved, glabrous, keels ciliolate; II lanceolate, 3-nerved, ciliate; III shorter, oblong, glabrous, nerveless; IV 0.—A variable plant, nearest perhaps to *A. Kuntzeanus* from which the paniculate inflorescence and smaller spikelets distinguish it. In some specimens the spikes are reduced to a few, and then the paniculate character disappears.

The following are Hackel's varieties of the Indian plant, which a larger series of specimens than he had access to tends to invalidate.—Roxburgh's *A. punctatus* and *A. glaber* (Anatherum glabrum, *Schult. Mant.* ii. 446) of both which there are good original drawings, do not fall under any of Hackel's vars. Both have pitted gl I; *A. glaber* has few spikes on the branches of the panicle, *A. punctatus* has many long quite simple spikes on a rather short rachis. Hackel has given a plant of Duthie's from Simla, 7–8000 ft., the mss. name of var. *himalayensis*; it is, I think, referable to var. *caucasicus*.

Var. *genuinus*; panicle 4–5 in. subsimple, branches with one or few spikes, gl. I not pitted appressedly hairy below, keels rigidly ciliolate. A. Vachelii, *Nees in Hook. & Arn. Bot. Beech. Voy.* 243. Kumaon, *Duthie* (*ex Hackel*).

Var. *Hænkii*; panicle 5–6 in. compound, branches with 4–8 spikes, sessile spikelets $\frac{1}{8}$ in., gl. I rarely pitted slightly depressed along the middle line, keels rigidly ciliolate. A. Hænkii, *Presl Rel. Hænk.* i. 340. A. Vachelii, β, *Hook. & Arn. l. c.* A. leptanthus, *Steud. Syn.* i. 391. Rhaphis stricta, *Nees in Hook. Kew Journ.* ii. (1850) 99.—Ceylon (C.P. n. 411 *in part*).

Var. *caucasicus*; panicle 3–4 in. subsimple, branches simple or subdivided, sessile spikelets $\frac{1}{7}$ in., gl. I not pitted sparsely hispid below the middle. A. caucasicus, *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1833) 286. Sorghum caucasicum, *Griseb. in Ledeb. Fl. Ross.* iv. 476.—Black Mts., *Duthie*.

Var. *punctatus*; panicle 4–6 in. compound, branches with many spikes, sessile spikelets $\frac{1}{8}$–$\frac{1}{7}$ in., gl. I pitted sparsely hairy below the middle, keels rigidly ciliolate. A. punctatus, *Trin. Sp. Gram. Ic.* t. 328; *Steud. Syn. Gram.* 391 (*an Roxb.?*). A. perfossus, *Nees ex Steud. l. c.*—Common.

? 25. **A. montanus**, *Roxb. Fl. Ind.* i. 267 (*non Benth. & Hackel*); tall, ascending from a stout creeping base, leaves long slender, panicle tall pyramidal, branches subverticilled capillary strict bearing one or several very slender elongate spikes, joints and pedicels sparsely hairy, spikelets minute, gl. I not pitted sparsely hairy. *Kunth Enum. Pl.* i. 506. ? A. saccharoides, *Roxb. l. c.* 263 (*non Sw.*).

NORTHERN CIRCARS, *Roxburgh.*

Stem 3–4 ft., as thick as a large crow-quill, creeping and nodose below. *Leaves* remarkably long, a little hairy on the upper side near the base only; mouth of sheath bearded. *Panicle* 4–8 in., pale green.—There are two excellent drawings of this plant in Roxburgh's collection (Nos. 90 and 889) both marked *A. montanus*, in which the lower branches of the panicle are 3-nate, the rest alternate, all bearing several spikes of about an inch long. Two other of Roxburgh's drawings, n. 890 and 2017, of which the latter bears the name of *saccharoides*, represent a plant differing apparently from *montanum* only in the panicle being composed of simple shortly pedicelled much longer spikes. The difference between the two forms is analogous to what occurs in *A. intermedius*, from which *A. montanus* differs in the much more slender pale green panicle, and spikes with minute spikelets, and in the capillary joints and pedicels not being represented as compressed and as being laxly covered with distant long spreading hairs. As to this latter character, which is uniform in all four drawings, allowance must be made for native artists' work. I have seen no plant resembling this species, which is a native of a region botanically unexplored since Roxburgh's day. It has obviously no affinity with that which Hackel, following Bentham, has described as *montanus*, Roxb., and which plant Roxburgh probably never saw.

26. **A. odoratus,** *Dna. Lisboa in Journ. Bomb. Nat. Hist. Soc.* iv. (1889) 123, *cum Ic.* & vi. (1891) 68, 203; aromatic, stem stout, nodes villous, leaves long broad, sheaths compressed, spikes few or many densely fascicled stipitate silky purplish, rachis and branches glabrous, sessile spikelets 1/6–1/5 in., callus densely silky, gl. I oblong-lanceolate truncate 7-nerved rarely pitted villous below the middle keels scaberulous.

The DECCAN; Khandeish, Poona, &c., *Lisboa.*

Stem 3–4 ft., as thick as a swan's quill at the base, sparingly branched, leafy. *Leaves* 1–2 ft., by 1/6–1/3 in., flat, acuminate, scaberulous on both surfaces and on the margins, bright green, nerves strong; sheath long, glabrous, smooth, upper sheathing the base of the inflorescence; ligule membranous, truncate. *Panicle* 2–4 in.; branches filiform and spikes 1–2 in. suberect, slender, flexuous; spikes rather tenacious, joints and pedicels flattened with a translucent centre, tips truncate. *Sessile spikelets*, callus-hairs half as long as the gls.; gl. I thin, rarely pitted, nerves slender, tip truncate, hyaline, nerveless; II keeled, thin, obtuse or truncate, ciliate; III shorter than II, ovate-lanceolate, eciliate, nerveless; awn about 3/4 in., faintly dilated towards the base. *Pedicelled spikelets* as long as the sessile or rather longer; gl. I narrow, many-nerved, dorsally glabrous; II 3-nerved, ciliate; III shorter, oblong, obtuse, nerveless, ciliate.—The compressed sheaths, panicled spikes, villous gl. I of the sessile spikelets, and aroma, seem to distinguish this from *A. Kuntzeanus*, which it strongly resembles in a dry state.

** Pedicels of upper spikelets and joints of rachis subterete, not or obscurely channelled, with no translucent centre. (See also 20. *concanensis.*)

27. **A. fascicularis,** *Roxb. Fl. Ind.* i. 265; annual, slender, leaves linear, sheaths hardly compressed, panicle oblong, branches subsolitary flowering almost to the base sparingly divided, spikes slender subsessile, joints and pedicels linear subterete or compressed not channelled shortly rigidly ciliate, sessile spikelets 1/6–1/5 in., gl. I ovate-lanceolate flat smooth scabrous or shining 7–9-nerved keels shortly ciliate towards the

truncate tip. *Steud. Syn. Gram.* 392; *Hack. Monogr. Androp.* 541. A. gangeticus, *Hack. l. c.* 539.—Andropogon, *Wall. Cat.* n. 8816.

TROPICAL HIMALAYA, from Garwhal to Sikkim. LOWER BENGAL, ASSAM, the CENTRAL PROVINCES, and BURMA.—DISTRIB. Tonkin.

Stem 2–3 ft., decumbent and branched below, leafy, nodes glabrous or nearly so. *Leaves* 12–16 by $\frac{1}{6}$–$\frac{1}{3}$ in., glabrous or hairy, base narrowed, setaceously acuminate, scaberulous; sheath hirsute or subglabrous, mouth bearded; ligule shortly ovate. *Panicle* 1–2 in., long-peduncled, usually narrow, green or purplish; rachis slender, glabrous or nodes bearded; branches erect, lower usually binate covered to the base with spikes. *Spikes* $\frac{1}{4}$–$\frac{1}{2}$ in.; joints few, flattened but not 2-ribbed, ciliate with white or purple hairs. *Sessile spikelets* dorsally flattened, callus bearded; gls. thin, I glabrous on back and sides, margins involute, nerves very slender; II chartaceous, acute, 5–7-nerved; III lanceolate, 2-nerved, ciliate; IV much shorter, 2-fid, lobes triangular, ciliate; awn $\frac{1}{3}$ in. long; palea 0, or minute, broadly ovate. *Ovary* glabrous. *Pedicelled spikelets* neuter, narrower than the sessile; gl. I many-nerved, keels scaberulous; II acute, 7-nerved; III obovate-oblong, ciliate.—A good character of this species is the branches of the panicle bearing spikelets down close to the rachis. Hackel (who doubtfully places this in his subgenus *Sorghum*) describes gl. IV of the sessile spikelet as having a lanceolate acuminate glabrous nerveless palea as long as the gl.; no doubt an error.

28. **A. venustus,** *Thw. Enum. Pl. Zeyl.* 367; stems tall, leaves narrow, sheaths hardly compressed, panicle elongate interrupted, rachis and spreading opposite and alternate branches capillary glabrous, spikes small, joints 3–8 and pedicels very slender glabrous terete not channelled, sessile spikelets narrowly lanceolate acute, gl. I dorsally compressed nerveless tip 2-toothed, keels scabrid above the middle, II very shortly awned, keel smooth or scabrid upwards. *Hack. Monogr. Androp.* 545; *Trim. Cat. Ceyl. Pl.* 108.

CEYLON; Central Province, alt. 4000 ft., *Thwaites.*

Stem 2–4 ft., strict, subsimple, as thick as a goose-quill below and clothed with short pubescent sheaths. *Leaves* 12–16 in., smooth or scaberulous above, midrib very broad and prominent beneath; sheath subcompressed, smooth; ligule a ridge of hairs. *Panicle* 12–16 in., dull purplish, much branched. *Spikes* narrow, laxfld., joints 3–8 and pedicels = $\frac{1}{3}$ the sessile spikelets. *Sessile spikelets* $\frac{1}{6}$ in., slightly curved; callus small, stellately bearded with white hairs; gl. I quite smooth, flat or rather convex dorsally; II chartaceous, linear-lanceolate, acuminate, 3-nerved, keel acute; III smaller, ovate, acuminate or aristulate, ciliate above, 1–3-nerved; IV linear, 2-fid, awn very slender. *Pedicelled spikelets* longer than the sessile and more acuminate, nearly glabrous, male; gl. I 7-nerved, 3 towards the margin on each side; II and III as in the sessile; IV narrow, glabrous, awn 0.—Hackel, who places this in subgen. *Vetiveria,* describes gl. I of the pedicelled spikelet as 5-nerved. The habit spikelets and glumes are those of subgen. *Amphilophis,* but the joints and pedicels are not channelled. Duthie (*Grass. N.W. Ind.* 22) gives the Jhelum Valley, *Stewart,* as a habitat, doubtless erroneously.

B. *Spikes* small, of 1–3- rarely 4 pairs of spikelets, often reduced to 3 spikelets, a sessile and 2 pedicelled. *Panicle* more or less pyramidal, rachis and branches capillary.

29. **A. micranthus,** *Kunth Revis. Gram.* i. 165, *Enum. Pl.* i. 504; stem erect or ascending simple or nearly so, leaves linear base hardly narrowed sheaths closed, spikes of 2–3 pairs of spikelets, joints and pedicels shortly ciliate or subglabrous, sessile spikelets $\frac{1}{10}$–$\frac{1}{8}$ in., gl. I linear-oblong dorsally channelled glabrous scaberulous or villous, keels minutely subpectinately ciliate. *Steud. Syn. Gram.* 396; *Hack. Monogr.*

Androp. 488; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* iv. (1889), vi. (1891) 69. A. alternans, *Presl Reliq. Hænk.* i. 342; *Kunth Enum. l. c.* 502. A. cœrulescens, *Kunth l. c.* 504. A. capilliflorus, *Steud. in Zoll. Syst. Verz.* 58. A. parvispica, *Steud. l. c.* 397. A. serratus, *Miq. Prolus. Fl. Jap.* i. 192. Anatherum parviflorum, *Spreng. Syst.* i. 290. Chrysopogon violascens, *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1893) 319. Sorghum parviflorum, *Beauv. ex Roem. & Sch. Syst.* ii. 840. Rhaphis cœrulescens, *Desv. Opusc.* 69. R. microstachya, *Nees ex Steud. l. c.* 397. Holcus cœrulescens, *Gaud. in Freyc. Voy. Bot.* 411, t. 27. H. parviflorus, *Br. Prodr.* 199.

WESTERN HIMALAYA, from the Ravi to Kumaon, alt. 4–6000 ft. KHASIA HILLS, alt. 5000 ft., *Clarke.* The NILGHIRI, CONCAN and DECCAN HILLS.—DISTRIB. E. Asia and Malaya, Australia, S. Africa.

Stem 2–3 ft., as thick as a crow-quill or thicker, terete, nodes more or less bearded. *Leaves* 6–12 by $\frac{1}{6}$–$\frac{1}{4}$ in., setaceously acuminate, flat, more or less hairy with tubercle-based hairs, surfaces and margins scaberulous, base rounded; sheaths tight; ligule short, truncate. *Panicle* 2–6 in., oblong or pyramidal; rachis and branches spreading, perfectly smooth, flexuous. *Spikes* $\frac{1}{5}$–$\frac{1}{3}$ in., pale yellow violet or red-brown, joints and pedicels slender often ciliate on one margin only. *Spikelets* small, callus stellately bearded; gl. I narrowly truncate, 4–6-nerved, scaberulous in all the specimens I have examined; margins narrowly inflexed; II lanceolate, acuminate or mucronate, scaberulous, 1–3-nerved; III short, obtuse, eciliate, nerveless; IV awn $\frac{1}{3}$–$\frac{2}{3}$ in. *Pedicelled spikelets* male, callus naked; gl. I oblong, 7-nerved, margins hardly inflexed; II oblong, obtuse, 3–5-nerved; III oblong, hyaline; IV narrow, awnless.—Spikes often reduced to 3 spikelets, a sessile and 2 pedicelled males.—I have not cited Hackel's synonymy and authorities for the non-Indian forms with more spikelets in each spike. It is very difficult to distinguish *A. micranthus* from small forms of *A. assimilis.* I have seen no specimens from Lisboa.

Var. *villosulus,* Hack. l. c. 490; usually much stouter, sheaths bearded at the nodes and leaves hispidly hairy, gl. I of sessile spikelets often hispidulous. A. villosulus, *Steud. Syn. Gram.* 397; *Lisboa in Bomb. Journ. Nat. Hist.* vi. (1891) 69 —(villosus). Chrysopogon villosulus, *Nees ex Duthie Grass. N.W. Ind.* 23 (*excl. some Syns.*). C. montanus, *Duthie Fodd. Grass. N. Ind.* 40. Rhaphis villosula, *Nees ex Steud. l. c.*—Kumaon, *Royle,* &c. Rajputana, Mt. Aboo, *Duthie.* Behar, on Parusnath, *J. D. H.,* &c. Khasia Hills, *Griffith.*

30. **A. assimilis,** *Steud. in Zoll. Syst. Verz.* 58; *Syn. Gram.* 397; suffruticose, fastigiately branched from a decumbent base, leafy, leaves linear-lanceolate much narrowed to the base, lower sheaths open, branches of pyramidal panicle capillary at length widely spreading, joints and pedicels shortly ciliate, sessile spikelets $\frac{1}{10}$–$\frac{1}{8}$ in., gl. I oblong or linear-oblong narrowly truncate glabrous or silkily villous below the middle 2–5-nerved between the shortly pectinately ciliate keels. *Miq. Fl. Ind. Bat.* iii. 489. A. montanus, *Benth. Fl. Hongk.* 423 (*excl. Syn.*); *Hack. Monogr. Androp.* 491 (*excl. Syn.*); *Lisboa* in *Journ. Bomb. Nat. Hist. Soc.* vi. (1891) 203. A. capillaceus, *Wall. mss.* A. glaucopsis & subrepens, *Steud. l. c.* Chrysopogon pictus, *Hance in Ann. Sc. Nat. Ser.* 5, v. (1866) 252. C. glaucopsis, *Duthie Grass. N.W. Ind.* 22. Rhaphis repens, *Nees ex Steud. l. c.*—Chrysopogon, *Wall. Cat.* n. 8781, 8786, 8787, 8790.

TEMPERATE HIMALAYA, from Kashmir to Sikkim, ascending to 5000 ft. The KHASIA and MUNNEPORE HILLS. BEHAR; on Parusnath, alt. 4000 ft. BURMA, *Wallich.* RAJPOOTANA, *Duthie.* The DECCAN and CENTRAL INDIA, *King,* &c.—DISTRIB. Java, China, Japan.

Stems 6 to probably 12 ft. or more; as thick as a goose-quill at the base, hard, shining, sometimes proliferously branched here and there, nodes more or less bearded.

Leaves $2\frac{1}{2}$–6 by $\frac{1}{10}$–$\frac{1}{5}$ in., setaceously acuminate, rather flaccid, glabrous or sparsely hairy on both surfaces, margins subserrulate; sheaths usually bearded at the mouth, upper appressed, lower open and often divaricate; ligule obscure. *Panicle* 2–5 in., triangular, ternately branched; rachis and branches capillary, glabrous, axils more or less bearded. *Spikes* $\frac{1}{4}$–$\frac{1}{3}$ in., joints and pedicels very slender, hairs not longer than the joint. *Spikelets* pale green; gl. I membranous, margins incurved sometimes ciliate with a few very long hairs, flat or concave towards the centre; II acute, margins nearly glabrous, keel flattened ciliolate above; III ovate, obtuse, glabrous; IV awn $\frac{1}{5}$–$\frac{1}{2}$ in., slender, base acute. *Pedicelled spikelets* larger than the sessile, male or neuter; gl. I linear-lanceolate, green or reddish, glabrous or ciliate, 7-nerved, keels ciliolate; II 3–5-nerved; III $\frac{1}{3}$ shorter, oblong, glabrous, nerveless; IV 0.—I have seen no Javanese or other authentic specimens, and hence assume the correctness of Hackel's identification of the Indian plant with it. It is certainly not Roxburgh's *A. montanus*.

31. **A. Hugelii,** *Hack. Monogr. Androp.* 492; stem erect branching from the base, nodes bearded, leaves much narrowed below or petioled linear scaberulous, panicle ovate-oblong, spikes with 2–3 pairs of spikelets, joints shortly ciliate, sessile spikelets $\frac{1}{8}$–$\frac{1}{7}$ in., gl. I oblong or oblong-lanceolate glabrous or villous below the middle 7-nerved tip truncate keels ciliate with long hairs, III minute ovate. *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vi. (1891) 69.

WESTERN HIMALAYA? *Huegel.* RAJPOOTANA, on Mt. Aboo, *King*, &c. CENTRAL INDIA and the CENTRAL PROVINCES, *Duthie*, &c.

Stem shortly creeping or suffrutescent below, often red, branches $2\frac{1}{2}$–$3\frac{1}{2}$ ft. *Leaves* 4–10 by $\frac{1}{3}$–$\frac{1}{2}$ in., acuminate, puberulous beneath, margins scaberulous sometimes ciliate with long hairs; sheath slightly compressed; ligule short, membranous, ciliate. *Panicle* 2–$3\frac{1}{2}$ in., shining, branches capillary, axils softly bearded. *Spikes* about $\frac{1}{3}$ in. long, green or purplish; gl. I of sessile spikelets truncate, chartaceous, dorsally polished, margins narrowly incurved, cilia of keels very variable in length; II glabrous, truncate, apiculate, ciliate, keel much thickened; III minute, ovate, glabrous; awn of IV $\frac{1}{2}$–$\frac{2}{3}$ in., base very slender. *Pedicelled spikelets* rather longer than the sessile, lanceolate, green or purple; gl. I 9–11-nerved, keels and back ciliate; II as long, acuminate, 5-nerved, ciliate; III nearly as long, hyaline, oblong, obtuse, glabrous; IV very narrow.—I have seen no typical specimen of this plant which Hackel described from Huegel's specimens, of which the habitat is unknown. The gl. III he describes as absent, an oversight, as it is present in spikelets of the type kindly procured from Vienna for me by Dr. Stapf, and in those collected by King, Duthie and others. Lisboa l. c. 69 describes a var. *fœtidus*, Hack. mss. as common all over the Bombay Presidency, and as having a soft and very pleasant smell. I fail to find any characters in the specimens I have examined, or in the descriptions given, to distinguish it from *A. Hugelii*, except that according to Lisboa the pedicelled spikelet of *fœtidus* has no gl. IV.

32. **A. Schmidii,** *Hook. f.*; stems subsimple or branching below, ascending leafy, nodes bearded, leaves lanceolate acuminate rigid scabrid above base suddenly contracted, sheaths terete smooth, panicle contracted, branches short erect, sessile spikelets broadly oblong obtuse convex 5–7-nerved between the very shortly ciliate and sparsely hairy keels, margins narrowly incurved, II broadly oblong glabrous 3-nerved, III very small ovate, IV a slender awn.

NILGHIRI HILLS; *Schmid*; Nadavatum, in pastures, alt. 6000 ft., *Lawson.*

Stem 3–4 ft., rather stout, red-brown, smooth. *Leaves* 3–5 by $\frac{1}{6}$–$\frac{1}{3}$ in., finely acuminate, midrib strong, scabrid above with sometimes tubercle-based bristles, scaberulous beneath, margins scaberulous; sheath long, mouth bearded; ligule obscure. *Panicle* 2–4 in., loosely or densely branched; branches and branchlets smooth. *Spikelets* brown or dull green, callus short, broad, shortly bearded; gl. I rather coriaceous, dorsally shining, smooth or scaberulous; II chartaceous; III broadly ovate, obtuse, nerveless; IV awn $\frac{1}{4}$ in., very slender. *Pedicelled spikelets* narrower; pedicels shortly ciliate; gl. I 9-nerved, ciliate all over; II narrowly lanceolate, 5-nerved, margins ciliate; III oblong; IV 0.—A stouter grass than the foregoing, with very scabrid leaves and much broader spikelets. Allied to *A. micranthus*, differing conspicuously in the rigid scabrid foliage.

33. **A. filiculmis,** *Hook. f.*; annual, stem elongate filiform flaccid much branched, nodes bearded, leaves 2–4 in. linear-lanceolate finely acuminate flaccid base suddenly narrowed, sheaths lax lower open, panicle long-peduncled lax-fld., rachis and branches capillary, pedicels of upper spikelets ciliate with long hairs, sessile spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. oblong-lanceolate obtuse 5–7-nerved between the keels villous below the middle or all over, keels ciliate with long slender hairs.

The DECCAN; Poonah, in rocky places, *Jacquemont* (n. 310); MAWAR; Dhomsha, *Woodrow* (*Herb. Bomb.* n. 26.)

Stems 2–3 ft., apparently decumbent and interlaced, copiously geniculately branched throughout, quite glabrous, very weak, internodes long pubescent. *Leaves* pale green, $\frac{1}{8}$–$\frac{1}{6}$ in. broad, tip filiform, glabrous or sparsely hairy beneath, margins smooth ciliate towards the very narrow base, costa and nerves very slender; sheaths long, narrow, spreading at the ramifications, glabrous, bearded at the top; ligule broad, membranous, ciliate. *Panicle* 1–2 in., branches few of extreme slenderness. *Spikelets* pale green or white; callus densely shortly villous; gl. I of sessile membranous, nerves faint; II oblong, truncate, mucronate, 3-nerved, glabrous; III very small, ovate, nerveless, eciliate; IV, awn $\frac{1}{2}$–$\frac{3}{4}$ in., column brown twisted. *Pedicelled spikelets* narrower than the sessile; gl. I lanceolate, tip truncate mucronate, 7–9-nerved, ciliate; with long hairs; II as long, ovate-lanceolate, acute, strongly 5–7-nerved; III broadly oblong, hyaline, nerveless; IV 0.—A very delicate grass. The sessile spikelets of Jacquemont's specimens are nearly glabrous, of Woodrow's densely villous, with snow-white hairs.

34. **A. pteropechys,** *Clarke in Journ. Linn. Soc.* xxv. (1889) 88, t. 38; stem very slender, nodes bearded, leaves very narrow, upper sheath spathiform, panicle subpyramidal, branches few capillary villous beneath the few pale brown spikes, spikelets 3–5, joints and pedicels shortly ciliate, sessile spikelets $\frac{1}{6}$ in., gl. I oblong obtuse 9-nerved glabrous keels pectinately ciliate for the upper $\frac{2}{3}$. *Hack. Monogr. Androp.* 690.

MUNNEPORE; on Jakpho and Kohima, alt. 5500–7500 ft., *Clarke.*

Perennial. *Stem* 2–3 ft. erect from a creeping rootstock, sparingly branched, leafy upwards, nodes thickly bearded. *Leaves* 3–6 by $\frac{1}{8}$–$\frac{1}{6}$ in., finely acuminate, narrowed towards the base, above and margins scaberulous; beneath sparsely hairy; sheaths closed, glabrous; ligule very short, ciliate. *Panicle* 2–3 in.; branches 3–6, ascending, flexuous, glabrous except below the spikes where they are villous with brown hairs. *Spikes* $\frac{1}{2}$–$\frac{2}{3}$ in.; pedicels of upper spikelets very slender, = $\frac{1}{2}$ the sessile spikelets and joints grooved. *Spikelets* erect, callus hairs = $\frac{1}{4}$ the spikelet; gl. I dorsally quite glabrous; II ovate-lanceolate, acute, 3-nerved, ciliate; III small, ovate, nerveless; awn $\frac{1}{3}$ in., capillary, base acute. *Pedicelled spikelets* narrower than the sessile; gl. I 9–11-nerved; II 3-nerved; III oblong, obtuse, glabrous, nerveless.

Subgen. VI. SORGHUM, *Hack.* *Spikes* panicled, tips of branchlets of panicle not bearded, joints 1 or few and pedicels filiform not or obscurely grooved ventrally, tips truncate. *Spikelets* few, often large, more or less dorsally compressed, broadly oblong ovoid or lanceolate; callus short; gl. I of sessile spikelets coriaceous, often shining, margins narrowly inflexed above, involute below; II awnless; III hyaline, 2-nerved; IV entire or 2-fid and awned in the cleft, rarely awnless. *Lodicules* (in the Indian species) ciliate.

35. **A. halepensis,** *Brot. Fl. Lusit.* i. 89; perennial, tall, stout or slender, panicle decompound, rachis of spike fragile, joints bearing a circular scar with entire margins, pedicelled spikelets usually male about as long but narrower than the sessile, pedicel = $\frac{1}{2}$ the sessile spikelet. *Sibth. Fl. Græc.* i. t. 68; *Kunth Enum. Pl.* i. 502, *Suppl.* 412, t. 40, f. 1; *Steud. Syn. Gram.* 394; *Thw. Enum. Pl. Zeyl.* 366. A. arundinaceus, *Scop. Fl. Carn. Ed.* ii. 274. A. avenaceus, *H. B. & K. Nov. Gen. & Sp.* i. 189. A. controversus & dubitatus, *Steud. Syn. Gram.* 391, 394. A. laxus, *Roxb. Fl. Ind.* i. 271 (*non Willd.*). A. miliaceus, *Roxb. l. c.* 272; *Hack. Monogr. Androp.* 541. A. miliformis, *Schult. Mant.* ii. 448. A. Sorghum, subsp. halepensis, *Hack. l. c.* 501. Sorghum capense, *Herb. Heyne ex Wall. Cat.* n. 8778 C. S. dubium, *C. Koch in Linnæa*, xxi. (1848) 443. S. giganteum, *Edgew. in Journ. As. Soc. Beng.* (1852) 181. S. halepense, *Pers. Syn.* 101; *Reichb. Ic. Fl. Germ.* t. 54; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 54, t. 91; *Nees Fl. Afr. Austr.* 88; *Griseb. Fl. Brit. W. Ind.* 560; *Benth. Fl. Austral.* vii. 540; *Wall. Cat.* n. 8778; *Trim. Cat. Ceyl. Pl.* 108; *Aitchis. Cat. Panjab. Pl.* 175; *Duthie Grass. N.W. Ind.* 23, *Fodd. Grass. N. Ind.* 40, t. 27. S. saccharatum, *Hohen. Pl. Nilghiri*, n. 1284 (*non Pers.*). S. Schreberi, *Tenore Fl. Neap. Syll. App.* iv. 4. Blumenbachia halepensis, *Koel. Descr. Gram.* 29. Trachypogon avenaceus, *Nees Agrost. Bras.* 354. Holcus halepensis, *Linn. Sp. Pl.* 1047; *Host Gram. Austr.* i. t. 1; *Schreb. Beschr. Græs.* i. t. 18; *Jacq. Eclog. Gram.* t. 48. H. decolorans, *Willd. Sp. Pl.* iv. 931. H. Catamucha, *Ham. ex Wall. Cat.* n. 8778 F.

Throughout INDIA, BURMA and CEYLON in open places.—DISTRIB. Most warm countries.

Roots creeping, stoloniferous. *Stem* 3–15 ft., erect, leafy, simple or branched, nodes pubescent. *Leaves* 8–18 in., or more, up to 3 in. broad, narrowed to the rounded base, tip filiferous, glabrous except towards the often villous base, flat or waved, midrib broad, margins scabridly serrulate; sheath terete; ligule rounded. *Panicle* 6 in. 2 ft., very variable in form and amount of ramification, typically pyramidal with long suberect or spreading or drooping whorled branches, axils often bearded. *Spikes* of 1–3 rarely 5–7 pairs of spikelets, sometimes reduced to a triplet of a sessile fertile and 2 pedicelled male rarely neuter spikelets, joints of rachis and pedicels angular or compressed, glabrous or shortly ciliate. *Sessile spikelets* $\frac{1}{7}$ to nearly $\frac{1}{4}$ in., usually lanceolate, green or purplish, callus sparsely bearded; gl. I with involute sides embracing the others, more or less silkily hairy, rarely glabrous, 5–11-nerved above, there keeled and ciliate tip depressed or not hyaline; II subcoriaceous, chartaceous and keeled above, margins ciliolate; III shorter, elliptic-oblong, hyaline 2-nerved; IV smaller, ovate, obtuse, entire or 2-fid, awned or not, awn $\frac{1}{6}$–$\frac{1}{4}$ in. or shorter; palea linear-oblong, obtuse, ciliate. *Pedicelled spikelets* linear-lanceolate, gl. I glabrous, 5–9-nerved, margins inflexed, keels subpectinately ciliate; II lanceolate, 3–5-nerved; III and IV, if present, hyaline.—I have restricted the synonymy of this grass chiefly to Indian names, and those under which good figures are given. It is no doubt the wild form of the following (*A. Sorghum*) and its grain has long been used by natives of India. But whether the *Sorghum* form originated from cultivation of the wild in India, or in Africa, where both are very common, can be only a matter of conjecture. Both seem to be now cultivated in India according to Watt (Dict. of Economic Products of India) and others, and transition forms are frequent. Hackel, who treats *A. halepensis* as a subspecies of *A. Sorghum*, subdivides it under 5 varieties and 6 subvarieties, founded on characters too variable for use. Dr. Stapf, who has studied the African species as well as the Indian, proposes 2 varieties, or rather prevalent forms, between which transitions occur, both vary in habit and in having awned mucronate or awnless spikelets; they are a. *genuinus*, of which *miliaceus*, Roxb., may be regarded as the type with sessile spikelets $\frac{1}{7}$–$\frac{1}{5}$ in. long, it is *Wall. Cat.* n. 8778 A. B. C. And b. *effusus*, with sessile spikelets $\frac{1}{5}$ nearly $\frac{1}{4}$ in., it includes *A. laxus*, Roxb., *A. halepensis*, Wight Cat. n. 1672, and *Wall. Cat.* n. 8778 D. E. F. H.

36. A. SORGHUM, *Brot. Fl. Lusit.* i. 88; annual, tall, usually very robust, panicle decompound usually thyrsiform with crowded whorls of erect branches and branchlets and spikes rarely subeffuse, rachis of spike tenacious, joints when forcibly separated leaving a ragged scar at the tip, pedicelled spikelets usually neuter, pedicels short. *Roxb. Fl. Ind.* i. 273; *Kunth Enum. Pl.* i. 581; *Steud. Syn. Gram.* 393. A. Sorghum, *subsp.* sativus, *Hack. Monogr. Androp.* 505. Holcus Sorghum, *Linn. Sp. Pl.* 1047; *Gærtn. Fruct.* ii. 2, t. 80; *Lamk. Encycl.* t. 838; *Grah. Cat. Bomb. Pl.* 238; *Dalz. & Gibs. Bomb. Fl. Suppl.* 99.

Cultivated throughout the warmer parts of Europe, Asia and Africa.—Introduced into America, Australia, &c.

Under *A. halepense* I have alluded to *A. Sorghum* as the cultivated form of that plant. Of the early history of its culture nothing is recorded, it having no Sanskrit name, and there is no evidence of its being known to the ancients of Europe or the East. Variable as it is, its forms appear to be much less fixed than those of wheat and barley, which gives rise to the suspicion that they are of comparatively recent origin. Many authors have endeavoured to limit by botanical characters some or all of its known varieties, and more have applied specific names to forms they could not, or did not try to identify with known ones. The result is a redundancy of names, and an inextricable synonymy. Watt's "Dict. of Economic Products of India" has treated in great detail the culture of many varieties, but under names that have little or no significance. Hackel has essayed to clean this Augean stable, and has devoted 15 pages of his Monograph to the forms of *A. Sorghum*, of which he describes 37 varieties and 12 subvarieties. His earnest and meritorious attempt has the great advantage of approximately harmonising most of the Indian citations and synonyms, and I therefore give a précis of it. It, however omits characters of the glumes which Dr. Stapf, in working up the African forms, has studied, and which characters appear to be of far more importance than those relied on by Hackel. Unfortunately it is not possible to combine the two classifications, for the obvious reason that Stapf's characters have been neglected in the descriptions of previous investigators, and it remains for the Indian botanists in this case, as in that of *Pennisetum typhoideum*, and indeed many other cultivated plants, to remove this reproach to Indian botany. Hackel's Indian varieties are as follow:—

Var. *Roxburghii*, Hack. l. c. 510; panicle lax ovate-oblong, rachis elongate, branches drooping, sessile spikelets ovate awnless, gl. I keeled in the upper third, grain white.—A. saccharatus, *Roxb. Fl. Ind.* i. 271; *Dalz. & Gibs. Fl. Suppl.* 99 (*non Kunth*).

Var. *Wightii*, Hack. l. c. 511 characters of var. *Roxburghii*, but panicle more dense, branches scabrid, spikelets broadly elliptic, gl. I hairy in the upper half. *Herb. Wight* n. 185.

Var. *vulgaris*, Hack. l. c. 515; panicle dense, branches erect or erecto-patent, sessile spikelets $\frac{1}{6}$ in. obovoid or subglobose obtuse awned; A. Sorghum, *Roxb. l. c.* 269; Sorghum vulgare, *Pers. Syn.* i. 101; *Reichb. Ic. Fl. Germ.* t. 80; *Duthie Grass. N.W. Ind.* 23, *Field & Gard. Crops.* 25, t. 6, *Fodd. Grass. N. Ind.* 41; Holcus Sorghum, *Linn.*

Var. *cernuus*, Koern. Handb. Getreit. i. 314; very robust, panicle drooping ovoid obtuse compact, rachis and appressed branches short suberect subvillous, sessile spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. broadly obovoid or rhomboid obtuse awned whitish densely silkily villous or glabrescent dorsally, grain globose white with a black hilum. A. cernuus, *Kunth l. c.* (*excl. Syn. Roxb.*). A. compactus, *Brot. l. c.* 88; Sorghum cernuum, *Host Gram. Austr.* iv. t. 3; *Reichb. Ic. Fl. Germ.* t. 80. Holcus cernuus, *Ard. in Sag. Sc. e Lett. Acad. Padua*, i. 12, t. 3, f. 1, 2.—*S. saccharatum*, Strachey & Winterbottom, from Kumaon, alt. 5000 ft. is a proliferous state.

Var. *glabrosus*, Hack. l. c. 517; panicle ovoid compact at length straw-colrd., sessile spikelet $\frac{1}{5}$ in. suborbicular not awned villous.—Serampore, *Voigt* (in Herb. Copenhagen.)

Var. *miliiformis*; (*not* A. miliformis, *Schult.*); panicle dense, sessile spikelets $\frac{1}{7}$ in. suborbicular at length straw-colrd. strigosely hairy, gl. IV with an exserted mucro, grain dark brown or violet brown.

Var. bicolor, *Hack. l. c.* 519; panicle very dense, sessile spikelets $\frac{1}{5}$ in. obtusely hexagonal awnless at length black, gl. I coriaceous below the middle, then deeply rugged, upper part striate hairy, grain almost twice as long as the gl. white. ?A. bicolor, *Kunth l. c.* 501, *non Roxb*; ?A. cernuus, *Roxb. Fl. Ind.* i. 270. ?Sorghum bicolor, *Willd. Enum. Hort. Berol.* 1036. ?Holcus bicolor, *Linn. Mant.* ii. 301.—Deccan Peninsula, *Herb. Wight* n. 185 B.

Dr. Stapf's arrangement of the Indian forms (including many of the African) is the following. I do not cite the habitats and synonyms of the varieties given by Hackel, for to do so might include plants to which the characters adopted by Dr. Stapf may not apply:—

* Glume I of sessile spikelets not depressed below the tip.

Var. *hians*, Stapf; gls. I and II divaricate exposing the white grain, tip of gl. I coriaceous.—S. vulgare, Pers. *β. Wight Cat.* n. 1670 (*not in Hackel.*)

Var. *Roxburghii*; Hack. l. c. 510; tip of gl. I hyaline, nerves obscure, sessile spikelets $\frac{1}{5}$ in. ovate acuminate awnless.—*Wall. Cat.* n. 8777 D. (the right hand specimen) F. H.

Var. *saccharatus*, Koern.; spikelets $\frac{1}{5}$ in. ellipsoid acute or apiculate awned, tip of gl. I hyaline, nerves obscure.

Var. *Thomsoni*, Stapf; spikelets $\frac{1}{4}$ in. ovate, gl. I strongly nerved below the tip.—A single specimen from Upper Gangetic Plain, *Thomson.*

** Glume I of sessile spikelets depressed below the tip, nerves distinct up to or near to the base.

Var. *nervosus*, Stapf; Hack. l. c. 513.—S. India, Herb. *Rottler.*

*** Glume I of sessile spikelets depressed below the tip, nerves distinct below the tip only.

Var. *obovatus*, Hack. l. c. 514; panicle very loose, gl. I and II at length more or less black and shining.—*Wall. Cat.* n. 8777 E. J. L.

Var. *vulgaris*, Hack. l. c. 515; panicle erect contracted, gl. I of sessile spikelets $\frac{1}{5}$ in. acute depressed and triangular for the upper $\frac{1}{3}$.—*Wall. Cat.* n. 8777 A; C is a form with smaller spikelets, only $\frac{1}{6}$ in. long.

Var. *miliiformis*, Hack. l. c. 518 (not A. miliformis, *Schult.*); panicle erect contracted, gl. I of sessile spikelets $\frac{1}{8}$–$\frac{1}{7}$ in. truncate depressed part very narrow reddish.

Var. *cernuus*, Koern.; Hack. l. c. 576; very robust, panicle forming a dense ovoid or oblong cernuous or decurved head, sessile spikelets small almost orbicular usually tomentose.—*Wall. Cat.* n. 8777 B. G. K.

37. **A. Stapfii**, *Hook. f.*; annual, stems short branching from the leafy base, leaves 2–3 in. linear-oblong acute base cordate, panicle erect slender loose, branches few short erect, spikelets few $\frac{1}{5}$–$\frac{1}{4}$ in. ovoid erect acute silkily villous with white hairs, gl. I ovate 9–11-nerved tip 2-toothed, and II very coriaceous.

TINNEVELLY, at Palamcottah, *Wight.*

Stems many, 12–16 in., spreading from the fibrous roots; geniculately ascending, quite smooth. *Leaves* ¼–⅓ in. broad, flaccid, flat, margins smooth, nerves 3–5 on each side of the slender midrib; sheaths of lower short open, of the upper long rather loose, quite glabrous; ligule very short, membranous, glabrous. *Panicle* 2–4 in.; rachis and branches stiff, angular, subscaberulous, rather stout, green. *Spikes* of 1–3 pairs of rather distant white spikelets; joints = ⅔ the sessile spikelet, stout, shortly villous truncate, pedicels = ½ the spikelet, more slender. *Sessile spikelet* terete; callus very short, stellately bearded with white hairs; gl. I and II very coriaceous both with strongly incurved sides, nerves very slender with many cross-nervules; III oblong, truncate, hyaline, 2-nerved, ciliate; IV short subrhomboidal, cleft to the middle into triangular acute ciliate lobes; awn in the cleft ¾ in., smooth, slender; palea linear-oblong, ciliate, nerveless. *Anthers* long. *Pedicelled spikelets* very narrow, imperfect, neuter, gl. I lanceolate, 9-nerved, bicuspidate; II shorter, 5-nerved.—A closely allied species, with similarly densely silky white spikelets, has been collected by Lunt in Southern Arabia, where it is stated to be cultivated. It is a stout plant with much larger leaves and the habit of the ordinary *Sorghum.* The spikelets are shorter and broader than in *A. Stapfii*, and are collected in a dense oblong panicle.

38. **A. serratus,** *Thunb. Fl. Jap.* 41; tall, erect, leaves narrowly linear, base narrow, lower branches of subsimple narrow elongate panicles whorled, spikes solitary 2–8-jointed, joints pedicels and callus shortly villous with rufous or purple hairs, sessile spikelets ⅐–⅙ in. ovoid ellipsoid or lanceolate, gl. I rufously hirsute towards the pale tip and sides, IV shortly awned or awnless. *Hack. Monogr. Androp.* 520; *Grah. Cat. Bomb. Pl.* 238.

Throughout INDIA, on the hills and plains from the Panjab to Burma, and southward to CEYLON and the NICOBAR ISLDS.—DISTRIB. Asia and Austral trop.

Perennial. *Stem* 3–4 ft., subsimple, nodes bearded. *Leaves* 4–20 by ⅙–¾ in., setaceously acuminate, glabrous or sparsely hairy on both surfaces, hairs often tubercle-based, midrib broad; sheaths terete below keeled upward, more or less hairy; mouth silkily villous; ligule very short, truncate. *Panicle* 4–12 in., oblong, rachis glabrous; branches capillary, about equalling the spikes, glabrous or scaberulous, whorls distant. *Spikes* ⅓–1½ in., red-brown; joints and pedicels = ½ the sessile spikelets, margins shortly villous. *Sessile spikelets*, callus acute; gl. I coriaceous, dark brown or nearly black, glabrous and polished on the middle dorsally, tips pale; II rather longer, lanceolate, acute, 1-nerved, hairy upwards; III shorter, lanceolate, acute; IV small, oblong, entire or 2-lobed, awned or not. *Lodicules* ciliate. *Pedicelled spikelets* narrower than the sessile, paler, hairy; gl. I 7-nerved; II 3-nerved; III and IV linear, ciliate.—Roxburgh does not seem to have known this grass.

Var. *genuinus*, Hack.; gl. IV of sessile spikelet 2-lobed, awned in the cleft. A. serratus, *Thunb. l. c.* (*non Retz*). A. laxus, *Willd. Sp. Pl.* iv. 907 (*non Roxb.*); *Steud. Syn. Gram.* 391. A. tropicus, *Spreng. Syst. Veg.* i. 287; *Kunth Enum. Pl.* i. 503 (*non Kunth*); *Thw. Enum. Pl. Zeyl.* 366; *Benth. Fl. Hongk.* 423. A. dichroanthus, *Steud. in Zoll. Syst. Verz.* 58. Sorghum fulvum, *Beauv. ex Roem. & Sch. Syst.* ii. 840; *Benth. Fl. Austral.* vii. 541; *Trim. Cat. Ceyl. Pl.* 108. S. Junghuhnii, *Miq. Fl. Ind. Bat.* iii. 783. Holcus fulvus, *Br. Prodr.* 199.

Var. *nitidus*, Hack.; gl. IV. of sessile spikelet entire not awned. A. consimilis and pedicellatus, *Steud. Syn. Gram.* 394. A. fuscus, *Presl Rel Hænk.* i. 342; *Kunth l. c.* 502. A. nigrum, *Herb. Ham. in Wall. Cat.* n. 8777 E. A. nitidus, *Kunth Revis. Gram.* i. 166, *Enum. l. c.* 510. Sorghum halepense, *Wall. Cat.* 8878 E. G.; *Wight Cat.* n. 2350. S. muticum, *Nees in Herb. Wight*; *Aitchis. Cat. Panjab. Pl.* 175; *Duthie Grass. N.W. Ind.* 23. Chrysopogon fuscus, *Trin. ex Steud. Nom. Ed.* II. i. 360. Holcus quinqueflorus, *Herb. Ham. ex Wall. Cat.* n. 8778 G.—Andropogon, *Wall. Cat.* n. 8879.

39. **A. purpureo-sericeus,** *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 469; annual, robust, upper nodes villous, branches of subsimple panicle

few or many in a whorl flexuous, spikes subsolitary, joints pedicels and callus villous with long white or red brown hairs, sessile spikelets $\frac{1}{3}$ in. oblong-ovate, gl. I 5–7-nerved villous all over tip acute, II 2-fid, awn long stout. *Hack. Monogr. Androp.* 524. Sorghum purpureo-sericeum, *Asch. & Schweinf. Beitr. Fl. Æthiop.* 310. S. Ritchiei, *Munro mss.*

The DECCAN; Belgaum, *Ritchie.* N. Canara, *Woodrow.* CENTRAL PROVINCES, *Duthie.*—DISTRIB. Abyssinia.

Stem 3–4 ft., erect; stout or slender. *Leaves* 8–10 by $\frac{1}{4}$–$\frac{1}{3}$ in., linear, finely acuminate, sparsely hairy, margins hardly scabrid; sheath, ribbed, glabrous or margin fimbriate, mouth villously silky; ligule very short, ciliate. *Panicle* 4–10 in., erect; rachis glabrous; branches $\frac{1}{3}$–1 in., capillary. *Spikes* 1–1$\frac{1}{2}$ in., rarely of 3 joints, sometimes of one sessile and 2 pedicelled spikelets, joints about $\frac{1}{2}$ the sessile spikelet. *Spikelets* erect or spreading or pendulous, dorsally flattened; gl. I coriaceous, margins involute from base to apex, keels rounded, villi red-brown or snow-white; II as long as I, acuminate or aristulate, dorsally rounded, coriaceous; III hyaline, epaleate, 2-nerved, ciliate; IV very fragile, 3-nerved, below the middle ciliate with long hairs; awn 1–1$\frac{1}{4}$ in., column stout red-brown twisted glabrous; palea minute, ciliate. *Pedicelled spikelets* usually shorter paler and narrower than the sessile; gl. I thinner, 7-nerved, shortly silky; II and III as in the sessile; IV lanceolate, acuminate, 1-nerved, ciliate, male.—The Indian differs from the African plant in having rather smaller spikelets, in gls. I and II of the sessile not or less scariose at the tip. The pubescence of the spikelet is more copious and pure white in a Deccan specimen from Woodrow, and in a Panjab ? one from Stewart. Hackel has named Duthie's specimens *A. purpureo-sericeus* var. *variegatus.*

Subgen. VI. VETIVERIA, *Hack.* *Spikes* panicled, branches of panicle many, whorled; joints 3 or more and pedicels linear filiform dorsally convex not channelled, tip truncate. *Sessile spikelets* laterally or dorsally compressed, awned or not; gl. I coriaceous, narrow, margins inflexed or involute, keels muricate; II awned or not; III hyaline; IV entire or 2-fid, awned. *Lodicules* glabrous.

But distinguished from *Chrysopogon* by the absence of a beard of rigid hairs on the tip of the branchlets, seen after the fall of the spike. *A. venustus* is removed to *Amphilophis.*

40. **A. squarrosus,** *Linn. f. Suppl.* 433; stem stout, leaves long rigid, sheaths strongly compressed, panicle narrow, branches simple strict, spikes many-jointed joints and pedicels glabrous, sessile spikelets linear-oblong glabrous, gl. I coriaceous acute dorsally flat, margins broadly inflexed muricate, IV linear-oblong mucronate or shortly awned. *Vahl Symb.* iii. 9; *Hack. Monogr. Androp.* 542; *Lisboa in Bomb. Journ. Nat. Hist.* vi. (1891) 67. A. muricatus, *Retz. Obs.* iii. 43, v. 21; *Kunth Enum. Pl.* i. 505, *Suppl.* 416; *Roxb. Fl. Ind.* i. 265; *Wall. Cat.* n. 8759; *Grah. Cat. Bomb. Pl.* 238; *Griff. Notul.* iv. 84, *Ic. Pl. Asiat.* t. 139, f. 57, t. 155, f. 1; *Thw. Enum. Pl. Zeyl.* 368; *Trim. Cat. Ceyl. Pl.* 108; *Dalz. & Gibs. Bomb. Fl.* 302; *Duthie Grass. N.W. Ind.* 90, *Fodd. Grass. N. Ind.* 36, t. 24. A. festucoides, *Presl Rel. Hænk.* i. 340. A. nigritanus, *Benth. in Hook. Niger Fl.* 573; *Steud. l. c.* 394. Anatherum muricatum, *Beauv. Agrostog.* 150, t. 22, f. 10; *Spreng. Pugill.* ii. 15. Vetiveria odorata, *Virey in Journ. Pharmac. Soc.* I. xiii. 499. V. arundinacea & muricata, *Griseb. Fl. Brit. W. Ind.* 559, 560. Mandelorna insignis, *Steud. l. c.* 359. Agrostis verticillata, *Lam. Dict.* 59, *Ill. Gen.* n. 162, *Suppl.* i. 255. Phalaris zizanioides, *Linn. Mant.* ii. 183. Holcus ?Viranae, *Herb. Ham. ex Wall. l. c.*—Virana, *Jones in As. Research.* iv. 306.

Throughout the Plains and Lower Hills of INDIA, BURMA and CEYLON, ascending to 4000 ft.—DISTRIB. Java, Afr. trop.

Stems 2–5 ft., in large, dense tufts with stout spongy aromatic roots, sparingly branched, as thick below as a goose-quill. *Leaves* 1–2 ft., subbifarious, narrow acute, erect, keeled, glabrous, margins scabrid; sheaths equitant, glabrous; ligule obscure. *Panicle* 4–12 in., conical, erect, rachis stout and erecto-patent filiform flexuous branches glabrous or scaberulous. *Spikes* slender, joints and pedicels about = the sessile spikelets. *Sessile spikelets* grey green yellow or purplish, $\frac{1}{8}$–$\frac{1}{4}$ in., slightly curved, glabrous, callus obscurely bearded; gl. I coriaceous, acute, 2–4-nerved; II coriaceous, 1-nerved, margins hyaline, keel muricate; III lanceolate, acuminate, 2-nerved, margins inflexed ciliolate; IV = III ciliate; palea very small, obtuse, glabrous. *Pedicelled spikelets* like the sessile but gl. I smooth, IV awnless. —Khus-khus grass.

41. **A. Lawsoni,** *Hook. f.*; stem erect from a stout rootstock, leaves narrowly linear curved acute or obtuse tips serrulate, sheaths compressed, panicle narrow elongate branches erect, spikes pale, joints 6–8 and pedicels slender obliquely truncate, gl. I linear rigid keels muricate dorsally flat scaberulous margins inflexed, II awned keel pectinately ciliate above the middle, IV 2-toothed awned.

MYSORE; at Bandypore, alt. 3000 ft., in moist ground, *Lawson*.

Rootstock horizontal; stems simple, slender, internodes very long. *Leaves* chiefly subradical, 2–5 by $\frac{1}{5}$ in., exactly linear, rigid, base not contracted, margins ciliate, nerves 4–8 strong; sheath of lower very short, of cauline very long, striate; ligule a ridge of hairs. *Panicle* 6–7 in., branches or peduncles of spikes opposite and fascicled, and branchlets slender puberulous with a white scurf. *Spikes* $\frac{1}{4}$–$\frac{1}{2}$ in., pale reddish, erect; joints very obliquely truncate, tips obscurely ciliate, and pedicels nearly = spikelet, slender, compressed. *Sessile spikelets* $\frac{1}{8}$ in., linear-lanceolate, callus bearded with silky hairs; gl. I coriaceous, tip obtuse, bristly; II cymbiform, tip 2-fid, awn longer than the gl., base ciliate; III oblong, ciliate, nerveless; IV arched, linear, obtusely 2-toothed, awn very slender; palea oblong, ciliate, nerveless. *Anthers* long. *Pedicelled spikelets* male, longer and narrower than the sessile, callus naked, gl. I 3-nerved, awned, keels pectinately ciliate; II acuminate, awned; III and IV oblong, obtuse, ciliate.—The tips of the branchlets bearing the spikes have a few short unequal bristles, showing an approach to those of *Chrysopogon*.

Subgen. VII. CHRYSOPOGON, *Hack.* *Spikes* of 3 spikelets, solitary or subsolitary (1–4 in *C. Gryllus*) on the capillary whorled branches of an erect or inclined panicle; branches with obconic obliquely truncate tips crowned with a ring or beard of stiff hairs. *Spikelets* 3-nate, a sessile bisexual, and 2 pedicelled males or neuters. *Sessile spikelets* narrow, laterally compressed; gl. I narrow, linear, rigid, erect, 4-nerved, usually laterally compressed; II broader, laterally compressed, obtusely keeled, 3-nerved, tip 2-lobed awned or not; III hyaline, 2-nerved; IV the narrow hyaline 1–3-nerved base of a long awn. *Pedicelled spikelets* dorsally compressed; gls. I and II awned or not.—*Ligule* of minute hairs in all.

The only subgenus with the tips of the branches of the panicle bearded, as best seen after the fall of the spike. The genus has a better claim to be retained than most of *Andropogoneæ*. The species are, with the exception of the first two, very difficult of definition, and must be regarded as merely provisionally established.

* Pedicels of the upper spikelets half as long as the sessile spikelet or longer.

† Pedicels of the upper spikelets glabrous or nearly so.

42. **A. Gryllus,** *Linn. Cent. Pl.* ii. 33; stem simple, panicle large,

branches long capillary spreading simple or branched and bearing 2–4 spikes, sessile spikelets $\frac{1}{5}$–$\frac{1}{3}$ in., gl. I 2-toothed dorsally rounded with 2 muricate or mamillate keels or channels, II mucronate or aristulate keel and sides bristly above the middle. *Kunth Enum. Pl.* i. 504; *Hack. Monogr. Androp.* 550; *Steud. Syn. Gram.* 395; *Host Gram. Austr.* ii. 1, t. 1; *Sibth. Fl. Græc.* i. t. 67; *Duthie Grass. N.W. Ind.* 22, *Fodd. Grass. N. Ind.* 40. A. echinulatus, glabratus & Royleanus, *Steud. l.c.* 395, 397. A. pallidus, *Kunth Revis. Gram.* i. 165. A. paniculatus, *Lam. Fl. Fr. Ed.* 2, iii. 633; *Ill. Gen.* 840, f. 1. Chrysopogon Gryllus, *Trin. Fund. Agrost.* 188; *Nees Gen. Fl. Germ. Monocot.* i. t. 93; *Benth. Fl. Austral.* vii. 537; *Aitchis. Cat. Panjab. Pl.* 176. C. glabratus, *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1833) 318. Rhaphis Gryllus, *Desv. Opusc.* 69. R. Royleana, *Nees ex Steud. l. c.* 397. R. echinulata, *Nees in Royle Illustr. Bot. Himal.* 417. Pollinia Gryllus, *Spreng. Pugill.* ii. 10; *Reichb. Ic. Fl. Germ.* t. 54. P. pallida, *Roem. & Sch. Syst.* ii. 829. Apluda Gryllus, *Presl Cyp. & Gram. Sic.* 55. Holcus Gryllus & pallidus, *Br. Prodr.* 199.—Chrysopogon, *Wall. Cat.* n. 8792 B. C. D.

TEMPERATE HIMALAYA; from Kashmir to Sikkim, alt. 4–9000 ft. KHASIA HILLS, alt. 4–5000 ft.—DISTRIB. Eastwards to S. Europe and N. Africa, Australia.

Stems forming dense hard tufts, erect, 6 in. to 5 ft. high, as thick as a goose-quill below; nodes smooth. *Leaves* 6–18 by $\frac{1}{6}$–$\frac{1}{3}$ in., linear, acute, glabrous or hirsute, margins serrulate; sheath keeled above, glabrous or pubescent. *Panicle* 3–8 in.; rachis angular, scabrid, axils bearded; branches 2–4 in., usually very many in a whorl, tips obliquely truncate densely bearded. *Sessile spikelets*; callus straight, acute; gl. I coriaceous, shining, smooth or scaberulous, margins broadly involute; II chartaceous, lanceolate, hyaline, margins ciliate, awn = the spikelet or shorter; III linear-oblong, obtuse, nerveless; IV linear, minutely 2-toothed, awn minute or $\frac{1}{2}$–$1\frac{1}{2}$ in.; palea small, oblong, glabrous. *Pedicelled spikelets* rather longer than the sessile, terete, lanceolate, acuminate; pedicels glabrous or ciliolate; gl. I acuminate or aristulate, 5–9-nerved, keels ciliate above; II lanceolate, acuminate, ciliate; III and IV narrower, ciliate; awn of IV = $\frac{1}{2}$ the glume.—Hackel has 5 subspecies, of which 3 are Indian. 1. *genuinus*; callus about $\frac{1}{8}$ in. hairs rusty-brown, awn of gl. IV 1–$1\frac{1}{2}$ in. stout. 2. *echinulatus*, callus hairs pale yellow, awn $\frac{1}{2}$–$\frac{3}{4}$ in. slender. 3. *glabratus*, awn of gl. II minute.

43. **A. aciculatus,** *Retz. Obs.* v. 22; stem creeping and branching below, leaves short, sheaths terete, panicle very narrow, branches strict erect, spikes solitary, sessile spikelets very narrow, callus very long acicular, gl. I linear acute or minutely 2-cuspidate convex margins broadly inflexed smooth below keels scabrid aculeolate above, II acuminate aristulate, keel ciliate above. *Roxb. Fl. Ind.* i. 262; *Grah. Cat. Bomb. Pl.* 238; *Hack. Monogr. Androp.* 562. A. acicularis, *Willd. Sp. Pl.* iv. 906; *Kunth Enum. Pl.* i. 505, *Suppl.* 417. A. javanicus, *Steud. Syn. Gram.* 396. A. subulatus, *Presl Rel. Hænk.* i. 341. Chrysopogon aciculatus, *Trin. Fund. Agrost.* 188; *Wall. Cat.* n. 8780; *Wight Cat.* n. 1674; *Thw. Enum. Pl. Zeyl.* 366; *Trim. Cat. Ceyl. Pl.* 108; *Duthie Grass. N.W. Ind.* 22 (acicularis), *Fodd. Grass. N. Ind.* 39; *Benth. Fl. Hongk.* 424, *Fl. Austral.* vii. 538. C. subulatus, *Trin. ex Steud. Nomencl. Ed.* II. ii. 360; *Miq. Fl. Ind. Bat.* iii. 491. C. trivialis, *Arn. & Nees in Nov. Act. Nat. Cur.* xix. *Suppl.* i. (1843) 171. Rhaphis acicularis, *Desv. Opusc.* 69. R. javanica, *Nees ex Steud. Syn. Gram.* 396. R. trivalvis, *Lour. Fl. Cochinch.* 553; *Trin. Sp. Gram. Ic.* t. 8, 9. Centrophorum chinense, *Trin. Fund. Agrost.* 106, t. 5.—Holcus, *Griff. Notul.* iii. 12, *Ic. Pl. Asiat.* t. 141, f. 1 (aciculatus).—*Rheede Hort. Mal.* xii. t. 43.

Plains and lower hills of INDIA, from Kumaon to Sikkim in the Himalaya, the Khasia Hills and southward to the Nicobar Islds. and CEYLON.—DISTRIB. Trop. Asia, Australia, and Polynesia.

Stem woody leafy and extensively creeping below, then erect, 1–2 ft., slender. *Leaves* densely tufted, 1–5 by $\frac{1}{8}$–$\frac{1}{5}$ in., flat, obtuse or acute, often undulate, glaucous, glabrous, margins spinulose; sheath terete; ligule a very narrow ciliate membrane. *Panicle* 1–3 in., pale or purplish; branches capillary, scaberulous or villous below the spikelets, tips obliquely truncate. *Sessile spikelets* $\frac{1}{6}$ in.; callus nearly as long as the glumes, acicular, shortly bearded; gl. I chartaceous, obscurely 2–3-nerved or nerveless; II lanceolate, acuminate or aristulate, 1-nerved; III linear-oblong, 2-nerved; IV linear, acuminate; awn $\frac{1}{6}$–$\frac{1}{3}$ in., scabrid; palea small, linear, obtuse, glabrous, nerveless. *Pedicelled spikelets* purple, much longer and narrower than the sessile; pedicels slender, scaberulous; gl. I subulate-lanceolate, aristulate, 3-nerved, ciliate; III and IV shorter, ciliate; palea minute, cuspidate.

†† Pedicels of upper spikelets villous with rusty rarely pale hairs.

§ *Glume I of pedicelled spikelets long-awned, II not or very shortly awned.*

44. **A. verticillatus,** *Roxb. Fl. Ind.* i. 263; tall, stout, leafy, leaves long very hairy, panicle broad of many whorls of many long simple smooth spreading arching branches terminated by solitary drooping spikelets, sessile spikelets $\frac{1}{4}$ in., callus rather long glabrous in front, gl. I setulose beneath the tip only strongly compressed above, II glabrous keel ciliate beneath the long awn, awn of IV 1$\frac{1}{2}$ in., pedicelled spikelets $\frac{1}{3}$ in. narrowly lanceolate glabrous 5-nerved keels ciliate at the tip only. *Kunth Enum. Pl.* i. 506; *Hack. Monogr. Androp.* 555. Chrysopogon verticillatus, *Trin. ex Steud. Nom. Ed.* II. i. 360.

Mountainous Regions (of the N. Circars probably), *Roxburgh.*

Root woody, perennial. *Stem* 4–6 ft., terete, solid towards the base, smooth, as thick as a small goose-quill. *Leaves* approximate, 18 by $\frac{3}{4}$ in., particularly hairy on the inside towards the base, margins spinulose. *Panicle* conical, lax, 8–10 in.; branches 2–3 in. *Spikes* narrow, pale. *Sessile spikelets* about twice as long as the pedicels; callus $\frac{1}{16}$ in. long; gl. I 4-nerved, tip hyaline, acute; II narrow, tip 2-fid, awn as long as itself; III oblong, obtuse, margins retrosely ciliate; IV the very narrow 3-nerved hyaline base of the awn, tip obscurely 2-lobed. *Pedicelled spikelets* pale, shining, pedicels abruptly truncate rather laxly ciliate on the margins and dorsally; gl. I with the 2 lateral nerves nearer the margin, awn longer than itself; II lanceolate, acuminate, ciliate, 3-nerved; III very narrow, ciliate, 2-nerved; IV linear, 1-nerved, 2-fid.—I have seen only a single very slender leafless specimen of what I take to be Roxburgh's plant, bearing the name in Arnott's handwriting on a ticket with Roxburgh's name in that botanist's writing in the corner. The description of the habit, leaves, &c., is taken from Roxburgh. Hackel, who does the same, describes the spikelets from a specimen also named by Arnott, and sent to him from Nees' Herbarium.

45. **A. asper,** *Heyne in Herb. Rottler* (asperum); leaves broadly linear acute base cordate midrib beneath spinulose, sheaths broad compressed laxly hirsute, panicle narrow of many whorls of short simple smooth erect branches bearing solitary rarely 2 erect spikes, sessile spikelets $\frac{1}{4}$ in., callus long villous all round, gl. I hispid beneath the tip strongly compressed above, II keel and sides more or less hispid above the middle, awn of IV 1$\frac{1}{2}$–2 in., pedicelled spikelets $\frac{1}{3}$ in. narrowly lanceolate 7-nerved keels ciliate.—Chrysopogon asper, *Heyne ex Wall. Cat.* n. 8784.

MADRAS; Pulicat Hills, *Heyne.*

Stem 2–3 ft., leafy below, very slender above. *Leaves* distichous, 12–18 by ½–¾ in., exactly linear, coriaceous, flat, smooth, midrib very slender, 11-nerved, margins spinulosely serrulate, and with a few long tubercle-based cilia towards the broad semi-amplexicaul base, midrib beneath serrulate; lower sheaths ½ in. broad, keeled, armed with scattered tubercle-based hairs. *Panicle* 7 in., rachis smooth; branches unequal, those of the lowest whorl the longest, about 1 in., usually with only one spike, tips very shortly bearded. *Sessile spikelets* pale, coriaceous; callus $\frac{1}{14}$–$\frac{1}{12}$ in.; awn of II as long as itself or shorter; III shorter than II, narrow, obtuse, 2-nerved, ciliate; IV the linear hyaline 3-nerved base of the awn. *Pedicelled spikelets* pale, shining, pedicels very shortly rufous-villous on both margins, excised at the tip in a semicircle; gl. I thin, tip 2-toothed, nerves strong subequidistant, or the 3 lateral on each side submarginal, margins narrowly incurved, keels ciliolate from base to tip; II lanceolate, acuminate, 3-nerved, ciliolate; III linear-oblong, 2-nerved, ciliate; IV narrowly lanceolate, 1-nerved.—I have seen only two specimens of this plant, that in Herb. Wallich, and another sent by Heyne to Rottler named *A. asperum* in his own handwriting. Very closely allied to *A. verticillatus*, but differing totally in habit and foliage according to Roxburgh's drawing and description of that plant, and coming from a very different part of India.

46. **A. lancearius,** *Hook. f.*; stem tall leafy, leaves narrowly lanceolate acuminate narrowed towards the base quite glabrous flat smooth midrib beneath quite smooth, sheaths imbricate compressed, panicle narrow of many whorls of short simple smooth erect branches bearing solitary erect spikes, sessile spikelets ¼ in., callus short glabrous in front, gl. I glabrous or minutely ciliate at the strongly compressed tip, II keel and sides above the middle more or less hispid, awn of IV 1¾ in., pedicelled spikelets ⅓ in. narrowly lanceolate 7-nerved keels eciliate except at the tip.

SIKKIM HIMALAYA; at the foot of the hills, Punkabaree, *Kurz*. CHOTA NAGPORE; Ramghur, Ghat, 1750 ft., *Clarke*.

Stem 2–3 ft. or more, leafy upwards. *Leaves* 12–14 by ⅓–½ in., rather thin, narrowed from below the middle to the base, quite smooth on both surfaces, midrib broad white above, nerves many very slender, margins minutely spinulose; sheaths keeled, quite glabrous; ligule a row of very fine short hairs. *Panicle* 6 in., quite like that of *A. asper*, from which this plant differs in the leaves, in the callus glabrous in front, in the much more hairy gl. II of the sessile spikelet, and in the eciliate keels of gl. I of the pedicelled spikelets.—The Chota Nagpore specimen has been named *A. verticillatus* by Hackel in a letter to Mr. Clarke, from which it differs in the form of the panicle and glabrous leaves; its gl. IV of the pedicelled spikelets is 2-fid, but that of the Sikkim plant is lanceolate and aristately acuminate. I have examined a specimen of what may prove to be a form of this plant collected at Gya in Behar (Herb. Hort. Calcutt.) in which gls. II and IV of the pedicelled spikelets are both awned, the awn of the latter (IV) being sometimes as fully developed as that of the sessile spikelet! The specimen is in too imperfect a condition to be described fully: the gl. I of the pedicelled spikelet is quite glabrous with a 2-toothed tip. In all other respects it agrees with *A. lancearius*.

47. **A. Hamiltoni,** *Hook. f.*; tall, stout, leaves very long linear gradually acuminate smooth above scaberulous beneath margins nearly smooth, panicle large ovoid dense of many long smooth erect branches in many closely approximate whorls each bearing 1–3 spikelets, spikes erect, sessile spikelets ¼ in., callus very short villous all round, gl. I minutely hispid at the strongly compressed tip, II keel ciliate close under the long awn, awn of gl. IV 2½ in., pedicelled spikelets ½ in. linear-lanceolate, gl. I 7–9-nerved ciliate close to the tip only. Holcus Carar, *Ham. in Wall. Cat.* n. 8792 A.—Chrysopogon, *Wall. Cat. l. c.*

BEHAR; Monghir, *Hamilton*.

Stem several feet high, stout, terete, leafy, quite smooth. *Leaves* 1½ ft. or more by ¼–½ in., flat, rather thin, many-nerved, beneath and midrib quite smooth, base rather contracted; sheath terete, smooth, glabrous; ligule a ridge of minute hairs. *Panicle* 6 by 2½ in., peduncle stout as thick as a duck's quill; rachis stout, terete; branches very unequal, longest 2–3 in., each with usually 2–3 spikes. *Sessile spikelets*, callus $\frac{1}{20}$ in.; gl. I 4-nerved, polished; II 2-lobed, awn as long as itself, margins not ciliate; III oblong, obtuse, hyaline, 2-nerved; III the linear hyaline 3-nerved eciliate base of the awn. *Pedicelled spikelets* pale green, pedicels sparsely villous on the margins and back with short rufous hairs, unequal, ⅓ and ¼ shorter than the sessile spikelet; gl. I narrowed into an awn often as long as itself, lateral 3 nerves on each side submarginal; II and III lanceolate, acuminate, retrorsely ciliate, II 3-nerved, III 2-nerved.—The specimen in Herb. Wallich consists of a portion of a stem a foot long, a panicle fully emerged from a leaf-sheath, with suberect branches which will probably spread later on, and several leaves. Another in Hamilton's Herbarium (now at Edinburgh) corresponds precisely. It is nearly related to *asper*, but a very robust tall plant, the branches of the panicle are much more numerous and longer, the leaves glabrous and not spinulosely margined, the spikelets much larger, the callus shorter, and the margins of gl. II of the sessile spikelet eciliate. It may prove to be a form of *A. verticillatus*.

§§ *Glumes I and II of pedicelled spikelets both awned.*

48. **A. Wightianus**, *Steud. Syn. Gram.* 395; leaves linear acute glabrous or pubescent spinulosely serrulate, lower sheaths compressed, rachis and branches of panicle minutely hairy, sessile spikelets ⅙ in., callus long densely bearded all round, gl. I laterally compressed above, minutely truncate glabrous below hispid above, II long-awned hispid above on the keel and sides, awn of IV 2–2⅓ in., pedicelled spikelets lanceolate pubescent much longer than the sessile. A. aristulatus, *Hochst. ex Steud. Syn. Gram.* 397; *Hack. Monogr. Androp.* 556. A. breviaristatus, *Steud. l. c.* 396. Chrysopogon Esenbeckii, *Wight Cat.* n. 1805 (*non Steud.*). C. Wightianus, *Nees ex Steud. l. c.*; *Wight Cat.* n. 1676, *Herb.* 3398. Rhaphis orientalis, *Desv. Opusc.* 69. R. Wightianus, *Nees ex Steud. l. c.*—Chrysopogon, *Wall. Cat.* n. 8785 C. D.

MADRAS, *Wight*, *Griffith*, &c. NILGHIRI HILLS, *Schmid*, *Kuntze*. BURMA, *Kuntze* (*Hackel*).—DISTRIB. Anam.

Variable in habit; stems short or tall, erect or ascending from a short stout creeping stock. *Leaves* 3–10 in., rigid, from glabrous to pubescent on both surfaces and with sometimes tubercle-based hairs; sheath glabrous; ligule very short, villous. *Panicle* 3–5 in., contracted, lower branches long, few in a whorl. *Spikes* solitary, green or brownish. *Sessile spikelets* subcylindric; callus long, hairs rusty; gl. I obscurely 4-nerved, tip 2-dentate; II chartaceous, tip 2-lobed, awn as long as the gl. or shorter; III linear-oblong, 2-nerved, ciliate; IV awn with a narrowly dilated 2-lobed base, column hispid. *Pedicelled spikelets* nearly ½ in.; pedicel truncate, margins shortly villous; gl. I glabrous or pubescent, 7-nerved, awn longer than the gl., keels ciliate; II lanceolate, 3-nerved, awn as long as the gl. or shorter; III oblong, 2-nerved, ciliate; IV very narrow, ciliate, nerveless.—I have seen no Ceylon specimen of this species; Thwaites' C.P. n. 3248 in Herb. Kew, is a starved specimen of *A. zeylanicus*. Nor have I seen Burmese or Anam ones.

49. **A. distichopyllus**, *Hook. f.*; stem stout fastigiately branched, leaves distichous erecto-patent narrowly linear rigid smooth, sheaths terete, panicle very long-peduncled narrow, branches very unequal erect smooth with one terminal spike, sessile spikelets ⅓ in. callus elongate shortly villous all round, gl. I 2-cuspidate quite glabrous, II glabrous, awn of gl. IV 2½ in., pedicelled spikelets longer than the sessile lanceolate, gl. I glabrous 7-nerved keels ciliate at the tip only.

SOUTHERN BURMA; on the coast at Kobok, *Kurz.*

A perennial, apparently of bushy habit several feet high, branches rigid terete glabrous. *Leaves* 4–6 by $\frac{1}{10}$–$\frac{1}{8}$ in., striate, complicate, subpungent, margins smooth, ciliate towards the base; sheath appressed, smooth. *Panicle* 5–6 in.; peduncle 12 in.; rachis slender, smooth; branches strict, in distant fascicles rather than whorls, tips very oblique with erect beards; lower 1 in. long, rarely with 2 distant spikes. *Sessile spikelets* very narrow; callus $\frac{1}{8}$ in.; gl. I 4-nerved; II narrow, complicate, 3-nerved, tip 2-lobed, awn as long as itself; III linear-oblong, obtuse, ciliate; IV the very narrow hyaline 3-nerved base of the awn. *Pedicelled spikelets* nearly $\frac{1}{2}$ in.; pedicels $\frac{1}{3}$ shorter than the sessile spikelet, tip retuse, margins ciliate; gl. II 3-nerved, ciliate, shortly awned; III as in the sessile spikelet; IV 0.—I have seen but one specimen of this very distinct-looking plant.

§§§ *Glume I of pedicelled spikelets not awned, II not or very shortly awned.*

50. **A. zeylanicus,** *Nees ex Steud. Syn. Gram.* 397; leaves very long and narrow, panicle ovate-oblong, branches in few whorls spreading with 1–3 terminal spikes, rachis scaberulous, sessile spikelets $\frac{1}{5}$ in., callus long naked in front, gl. I not laterally compressed above, dorsally with 2 rows of cilia or spinules above the middle tip truncate, awn of gl. IV $\frac{3}{4}$–$1\frac{1}{4}$ in., pedicelled spikelets much longer than the sessile lanceolate 5-nerved glabrous keels eciliate. A. nodulibarbis, *Hochst. ex Steud Syn. Gram.* 396; *Hack. Monogr. Androp.* 553. A. peninsulæ, *Steud. l.c.* Chrysopogon Arnottianus, *Nees ex Steud. l.c.* 396. C. Wightianus, *Thw. Enum. Pl. Zeyl.* 366 (C.P. 3248) (*excl.* var. β); *Trim. Cat. Ceyl. Pl.* 108 (*non Nees*). C. zeylanicus, *Thw. l.c.* (C.P. 996) (*non Steud.*). Rhaphis zeylanica, *Nees ex Steud. l.c.*—Chrysopogon, *Wall. Cat.* n. 8785 A. B.

NILGHIRI HILLS, alt. 7–8000 ft., *Wight*, &c. CEYLON, ascending to 6000 ft., *Walker*, &c.

Stems 1–3 ft., tufted, stout or slender. *Leaves* many from the base of the stem, 12–16 by $\frac{1}{20}$–$\frac{1}{6}$ in., flexuous, rather coriaceous, margins more or less laxly ciliate with rather long hairs; lower sheaths short, flattened, keeled; ligule of short hairs. *Panicle* 5–8 in., contracted or effuse, with long naked unequal lower branches. *Spikes* green or blueish. *Sessile spikelets*, callus $\frac{1}{10}$ in., hairs yellow or rusty brown; gl. I coriaceous, tip ciliate, often 2-toothed; nerves 2 pairs, obscure; II 3-nerved, tip 2-lobed, keel spinulosely ciliate above the middle; III oblong, obtuse, 2-nerved, retrorsely ciliate; IV the very narrow sub-2-lobed, 3-nerved, eciliate dilatation of the base of the awn. *Pedicelled spikelets* $\frac{3}{4}$ in.; pedicels truncate, margins shortly densely or laxly ciliate on one or both margins; gl. I narrowly lanceolate, keels minutely ciliate, nerves subequidistant or the lateral pairs submarginal; II acuminate, 3-nerved, retrorsely ciliate; III oblong, obtuse, 2-nerved, retrorsely ciliate; IV smaller, ovate-lanceolate, 1–3-nerved, ciliate.

** Pedicel of upper spikelets not half as long as the sessile spikelets.

51. **A. monticola,** *Schult. Mant.* iii. 665; stem erect or ascending usually very slender, leaves very narrow glabrous, lower sheaths compressed, panicles rather short of several whorls of few or many capillary flexuous very unequal branches bearing solitary spikes, sessile spikelets pale, callus short, gl. I compressed glabrous or keel ciliate above the middle, II dorsally more or less ciliate with short or long rigid bristles, awn of IV $\frac{1}{2}$–1 in. capillary, pedicelled spikelets lanceolate awned or not 7-nerved, pedicels = $\frac{1}{4}$–$\frac{1}{3}$ the sessile spikelet margins more or less villous.

WESTERN HIMALAYA, from Kashmir to Nepal, ascending to 6000 ft. Hilly districts, from the PANJAB to BEHAR and southwd. to CEYLON. BURMA, *Collett.*—DISTRIB. Affghanistan, S. Africa.

Stems tufted, 1–3 ft., simple or branched, usually almost filiform, rarely as thick as a crow-quill or stouter. *Leaves* 6–18 in., rarely more than $\frac{1}{8}$ in. broad, finely acuminate, quite smooth above and beneath, margins minutely scaberulous; upper sheaths terete, lower more or less compressed, sometimes very much so and membranous. *Panicle* 2–4 in., rarely more; rachis flexuous; branches in whorls of 3–12, rarely more, smooth or scaberulous, lowest $\frac{1}{4}$–1 in. or more, upper shorter; all quite smooth, or in the lower part together with the rachis scaberulous, rarely scaberulous throughout. *Spikes* very variable in size; the green blue and purplish or brown pedicelled always longer than the pale sessile. *Sessile spikelets* $\frac{1}{7}$–$\frac{1}{4}$ in.; callus hairs short or long, from white to rusty red; gl. I narrow, strongly compressed, margins membranous, tip rounded; II broader, tip 2-fid, with a short recurved awn, keel obtuse from glabrous to hirsute for a greater or less part of its length, with rigid or flexuous rufous or white bristles, margins membranous hardly ciliate; III hyaline, oblong, obtuse, ciliate; IV the long narrow hyaline 3-nerved eciliate dilatation of the awn. *Pedicelled spikelets* $\frac{1}{5}$–$\frac{1}{3}$ in., neuter or male, from ovate- to linear-lanceolate, acuminate; pedicels cuneate, margins sparsely or densely villous, the upper hairs in some of the most densely villous nearly equalling the spikelet from dark rusty red to white; gl. I thin, acute acuminate or awned, the awn equalling or shorter than the gl., glabrous or pubescent; nerves always 7, sub-equidistant, or 2 on each side sub-carinal; margins narrowly incurved, spinulosely ciliate or smooth; II lanceolate, acuminate, ciliate; III hyaline, oblong, obtuse, 2-nerved or nerveless; IV shorter, narrower, hyaline, 1–3-nerved.—I am unable to classify the varieties of this common and variable plant in accordance with geographical areas or other considerations. This, if possible, must be effected by field botanists in India. There is every gradation from the coarsely hirsute keel of *monticola*, to the perfectly smooth of some states of *Trinii*; from the awnless to long awned gl. I of the pedicelled spikelets, and from the glabrous to the pubescent of the same organ; the colour of which affords no character; nor does its length, or that of the cilia on its keels.

Var. *monticola proper*; gl. II of sessile spikelet villous for more or less of its length with long flexuous usually rufous rigid bristles. A. monticola, *Schultes l. c. Kunth Enum. Pl.* i. 506; *Steud. Syn. Gram.* 395; *Hack. Monogr. Androp.* 557 (*excl. var. villosus*). A. aciculatus, *Herb. Wight ex Wall. Cat.* n. 8782 B. A. montanus, *Koen. in Herb. Banks.* A. Sprengelii, *Kunth Revis. Gram.* 166. Chrysopogon montanus, *Trin. in Spreng. N. Entdeck.* ii. 93; *Trim. Cat. Ceyl. Pl.* 108. Pollinia fulva, *Spreng. Pugill.* ii. 93.—Chrysopogon, *Wall. Cat.* n. 8782.

Var. *Trinii*; gl. II of sessile spikelets glabrous or shortly ciliate, hairs of callus and pedicels often very pale reddish or white. A. Trinii, *Steud. Syn. Gram.* 395; *Hack. Monogr. Androp.* 558. A. ciliolatus, cœrulens, and increscens, *Steud. l. c.* Chrysopogon ciliolatus, *Boiss. Fl. Orient.* v. 458 (*excl. var. β.*); *Duthie Grass. N. W. Ind.* 22. C. cœruleus, *Duthie l. c.* 23, *Fodd. Grass. N. Ind.* 39, t. 60. C. increscens, *Nees ex Steud. l. c.* 396. C. Wightianus, *var.* leucanthus, *Thw. Enum. Pl. Zeyl.* 366; *Trim. Cat. Ceyl. Pl.* 108. C. serrulatus, *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1833) 318, *Sp. Gram. Ic.* t. 331; *Duthie l. c.* Rhaphis ciliolata and cœrulea, *Nees ex Steud. l. c.* 396, 395.—Chrysopogon, *Wall. Cat.* n. 8788, 8791.

Var. *robustus*, stem tall stout 2–4 ft. and upwards, as thick as a goose-quill below, leaves 8–10 by $\frac{1}{4}$ in., rather coriaceous, tapering from the base to the tip, scaberulous above, glaucous beneath; upper sheath 4–6 in. loose, terete keeled, panicle 6 in., sessile spikelets $\frac{1}{6}$ in. keel of gl. II hispidly ciliate from base to apex, awn of gl. IV $1\frac{1}{3}$ in., pedicelled spikelets $\frac{1}{5}$–$\frac{1}{3}$ in. lanceolate awned, gl. I awned dorsally pubescent, keels ciliate. Chrysopogon serrulatus, *Herb. Strach. & Winterb.*—Central India, Goona (*Herb. Hort. Calcutt.*) Kumaon, alt. 5500 ft. *Strachey & Winterbottom.*

52. **A. Hackelii,** *Hook. f.*; stem tall stout, leaves narrow finely acuminate, panicle oblong, rachis strict, branches smooth crowded in many superposed whorls short very unequal smooth spreading simple each with a solitary spike, sessile spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. golden yellow, callus very short beard fulvous brown, gl. I obtuse glabrous, II glabrous awned, awn of IV $\frac{3}{4}$–1 in., pedicelled spikelets rather shorter than the sessile, gl. I oblong acute quite glabrous 5–7-nerved not awned keel eciliate, II shortly awned.—Chrysopogon, *Wall. Cat.* n. 8783. *Wight Herb.* n. 1030 (*in Herb. Kew*).

TRAVANCORE, *Wight.* NILGHIRI HILLS; Gondaloo Ghat, alt. 4500 ft., *Lawson.*
Stem 4–5 ft., or more, as thick as a goose-quill below, leafy, quite smooth, branching upward, branches erect. *Leaves* 2–3 ft., by $\frac{1}{6}$–$\frac{1}{4}$ in, coriaceous, smooth, pale glaucous green, striate, margins sub-scaberulous; sheath subterete, keeled, smooth, glabrous; ligule a ridge of hairs. *Panicle* 4–6 in.; branches in 6–10 whorls, $\frac{1}{3}$–$\frac{2}{3}$ in. apart, the longest about 1 in. long, rather stiff, tips hardly oblique, beard of spreading rufous hairs. *Spikes* solitary. *Sessile spikelets* yellow; gl. I 4-nerved, polished; II subcymbiform, tip 2-lobed, 3-nerved, margins ciliolate, keel rounded and thickened, awn shorter than the gl.; III linear-oblong, obtuse, hyaline, ciliate, nerveless; IV very narrow, 1–3-nerved, hyaline, base and column of awn brown. *Pedicelled spikelets* pale green; yellow or purplish, male, pedicels = $\frac{1}{3}$ nearly $\frac{1}{2}$ the sessile spikelets truncate, margins densely villous with long rufous hairs, the upper of which = half the spikelets, gl. I thin, nerves subequidistant, or 2–3-nate pairs submarginal margins narrowly incurved; II lanceolate, 3-nerved ciliate; III oblong, 2-nerved, ciliate; IV narrowly lanceolate, 1-nerved ciliate.—A very handsome plant with a bright golden panicle. Wight's n. 1030 (which is not a catalogue number) is referred by Hackel to *A. Trinii* var. *increscens*, with the locality Courtallam, taken from Steudel. It differs from the n. 1030 in Herb. Kew in the villous sheaths with tubercle-based hairs, the leaves hairy on both surfaces and panicle branches 4–8, and is no doubt rightly referred to *Trinii.*

53. **A. velutinus,** *Hook. f.*; stem not tall compressed, leaves linear broad flat acuminate puberulous on both surfaces, sheaths strongly compressed keeled, panicle with flexuous rachis and short flexuous scaberulous branches minutely bearded at the truncate tips, sessile spikelets pale, callus very short rufous bearded, gl. I compressed keel ciliolate above the middle, keel of II hirsute, awn of IV 1 in., pedicelled spikelets oblong truncate strongly 7-nerved not awned keels ciliate dorsally glabrous or hirsute, pedicels very short. Chrysopogon velutinus, *Arnott in Herb. Wight* n. 2314.

MYSORE; at Cuddapah, *Wight.*
Stems 18 in. high, rather stout, soft, tufted, leafy from the base. *Leaves* 6–10 by $\frac{1}{4}$–$\frac{1}{3}$ in., distichous, flaccid, 5–9-nerved, slender midrib beneath and margins spinulosely ciliolate and with a few long hairs at the base; lower sheaths equitant, $\frac{1}{3}$ in. broad, strongly compressed and keeled, keel spinulosely ciliate, upper sheaths finely pubescent. *Panicle* (imperfect) 2$\frac{1}{2}$ in., branches $\frac{1}{3}$–1 in. *Sessile spikelets* $\frac{1}{5}$ in., pale yellow; gl. I with minutely ciliolate margins; II margins eciliate, gls. III and IV in both sessile and pedicelled spikelets as in *A. monticola.*—I have seen only one specimen of this plant which differs widely in habit and foliage from any form of *A. monticola,* in the broad flat flaccid pubescent leaves and sheaths. It is a native of a botanically unexplored district.

54. **A. polyphyllus,** *Hack. mss. in Herb. Duthie*; stem simple or fastigiately branched quite glabrous, leaves many long narrow rigid acuminate flat pale glaucous-green glabrous coriaceous, sheaths terete,

panicle oblong subsecund dense-fld. very pale, branches many short in many closely approximate whorls smooth, sessile spikelets $\frac{1}{6}$ in., callus long obtuse bearded at the very base only with long fulvous hairs, gl. I obtuse glabrous, keel ciliate towards the tip, II not awned keel glabrous or ciliate, awn of IV $\frac{1}{8}$–$\frac{1}{3}$ in. nearly straight pale, pedicelled spikelets narrowly lanceolate acuminate glabrous 7-nerved eciliate not awned, pedicels naked villous at the tip only. A. Aucheri, *var.* polyphyllus, *Hack. in Herb. Duthie.*

CENTRAL PROVINCES; Khandua, Chanda, and Jubbulpore districts, by the Nerbudda and Indravati rivers, &c., *Duthie.*

Stem 2–3 ft., stiff, as thick as a crow-quill or more. *Leaves* crowded, or not, 6–10 by $\frac{1}{12}$–$\frac{1}{6}$ in., pale glaucous-green and smooth on both surfaces, midrib and nerves very slender, margins minutely scaberulous; sheaths appressed, hard. *Panicle* 4–5 in.; branches $\frac{1}{4}$–$\frac{1}{2}$ in., very unequal; peduncle slender, quite glabrous. *Spikes* drooping, white or pale purplish. *Glumes* as in *A. monticola. Pedicelled spikelets* rather longer than the sessile; pedicels = about $\frac{1}{3}$? the sessile spikelets.—Habit, foliage and secund panicle very unlike *A. monticola*, and remarkable for the stout naked callus about $\frac{1}{16}$ in. long with a long-bearded base, and the naked pedicels villous at the tip only with erect fulvous hairs half as long as the spikelets. It differs from *Aucheri*, in the tall habit, long-glabrous glaucous foliage, glabrous peduncle and branches of the panicle, callus, pedicels, awnless pedicelled spikelets, and the very short awn of gl. IV of the sessile spikelet.

55. **A. Aucheri,** *Boiss. Diagn. Ser.* I. v. 7; densely tufted, basal sheaths silky, leaves short linear pubescent, sheaths terete very pale silky peduncle pubescent below the oblong panicle, branches in approximate whorls short very unequal scaberulous, sessile spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. callus long villous all over with long pale silky hairs, gl. I glabrous or keel and tip ciliate, keel of II hirsute, awn of IV $\frac{2}{3}$–1 in. pale, pedicelled spikelets longer than the sessile narrowly lanceolate 5–7-nerved, keels ciliate and with a long ciliate awn, pedicels = $\frac{1}{3}$ the sessile spikelet silkily villous. A. Aucheri, *a.* genuinus, *Hack. Monogr. Androp.* 560. Chrysopogon ciliolatus *β.* Aucheri, *Boiss. Fl. Orient.* v. 458.

SCIND; near Kurrachee, *Stocks.*—DISTRIB. Affghanistan, N. Africa.

Stem 6–18 in., simple or sparingly branched, base thickened, leafy. *Leaves* 2–4 by $\frac{1}{10}$–$\frac{1}{6}$ in., sometimes undulate, acute or acuminate, pale green, often ciliate towards the base, margins scaberulous; sheath very pale. *Panicle* 2–3 in., erect, long-peduncled, rachis scabrid. *Spikes* usually crowded, rarely binate on a branch. *Sessile spikelets*; callus obtuse; gl. I compressed, with sometimes long terminal bristles; II awned or not, awn hirsutely ciliate; III and IV as in *A. monticola. Pedicelled spikelets* $\frac{1}{5}$–$\frac{1}{4}$ in., pedicels silkily villous from base to apex; gl. I sparsely ciliate dorsally, and with very long cilia on the keels towards the tip, awn pale hirsute.—I have confined the description to the Scind plants. Hackel describes the species, which extends to Persia, Arabia, Morocco, and S. Africa as extraordinarily variable, no two specimens agreeing in all points, and the spikelets varying in the same specimen.' These remarks would probably apply to all the allied species of *Chysopogon*, in whose stability I have no confidence.

Subgen. IX. DICHANTHIUM, *Hack. Spikes* digitate, rarely solitary or panicled, subsessile or stipitate on the peduncle, joints many and pedicels linear filiform dorsally flat compressed; lower 1–4 pairs of spikelets homogamous (except sometimes in *A. annulatus*) male or neuter. *Sessile spikelets* dorsally compressed; gl. I with the margins usually inflexed and keeled above and involute or not below; II keeled, awnless; III hyaline; IV a naked awn, its base rarely narrowly hyaline, or 2-fid and awned in the cleft. *Pedicelled spikelets* like the sessile, but male or neuter, awnless.

* *Glume IV of sessile spikelets a simple awn, acute at the base.*

56. **A. caricosus,** *Linn. Sp. Pl. Ed.* ii. 1480 (*excl. Syn. Rumph.*); stem erect or decumbent below, leaves narrowly linear, sheaths compressed, spikes 1–4 in. solitary binate or subdigitately panicled, spikelets closely subdistichously imbricate, joints and pedicels $\frac{2}{3}$ shorter than the sessile spikelets $\frac{1}{6}$–$\frac{1}{5}$ in., gl. I of sessile spikelets obovate or oblong tip truncate denticulate dorsally more or less villous, keels with ciliate wings, II obtuse 3-nerved, III ovate-oblong ciliate. *Hack. Monogr. Androp.* 756.

Plains and low hills of India, from Scind to Burma and the Andaman Islds. (not in N.W. India) and southwd. to CEYLON.—DISTRIB. Mauritius, China.

Stem 1–2 ft., erect or ascending from a creeping base, often much branched, stout or slender, even capillary, grooved on one side, leafy; nodes bearded or not. *Leaves* 6–8 by $\frac{1}{10}$–$\frac{1}{4}$ in., finely acuminate, glabrous or ciliate, margins scabrous, sheaths smooth; ligule membranous. *Spikes* inclined, often flexuous, $\frac{1}{8}$–$\frac{1}{4}$ in. broad, silvery, lower sometimes stipitate; joints and pedicels = $\frac{1}{3}$ the spikelet, ciliate on one margin; callus short, broad. *Sessile spikelets* 5–7-nerved, margins gl. I. broadly incurved below, narrowly above; II narrow, 3-nerved, apiculate, margins ciliate, keel scaberulous; III ovate-oblong, hyaline, nerveless; IV awn $\frac{3}{4}$–1 in., column scabrid. *Pedicelled spikelets* smaller than the sessile; gl. I broadly oblong, silkily ciliate; II ovate-lanceolate, acute, ciliate.—A very variable grass, of which there are two principal forms.

Var. *genuinus*, Hack.; stem glabrous below the usually solitary spike, gl. I smooth above hairy towards the base. A. caricosus, *Linn.*; *Trim. Cat. Ceyl. Pl.* 108. A. binatus & tenellus, *Roxb. Fl. Ind.* i. 254, 255; *Steud. Syn. Gram.* 372, 371. A. filiformis, *Pers. Syn.* i. 103. A. serratus, *Retz. Obs.* v. 21; *Trin. Sp. Gram. Ic.* t. 329; *Roxb. Fl. Ind.* 253; *Steud. l. c.* 366. Lepeocercis serrata, *Trin. Fundam. Agrost.* 203; *Wight Cat* n. 1687, *Herb. Prop.* n. 1687. Heteropogon concinnus, *Thw. Enum. Pl. Zeyl.* 368.

Var. *mollicomus*, Hack.; stem pubescent below the spikes, gl. I 3-toothed dorsally hairy all over. A. australis, *Poir. Encycl. Suppl.* i. 585. A. barbatus & pertusus, *Herb. Ham. ex Wall. Cat.* n. 8809 B. C. A. curvatus, *Herb. Russ. ex Wall. Cat.* n. 8809 A. A. incurvatus, *Kœn. ex Trin. in Spreng. Entdeck.* ii. 91. A. Kœnigii, *Steud. Syn. Gram.* 381. A. mollicomus, *Kunth Revis. Gram.* i. 365, *Enum. Pl.* i. 497. Lepeocercis digitatus, *Royle Ill. Bot. Himal.* 416. Dichanthium nodosum, *Usteri Annal.* xviii. (1796) 11. Diplasanthera lanosum, *Desv. Opusc.* 67, t. 5, f. 1.—Andropogon, *Wall. Cat.* n. 8809, 8810 F. H. *Wight Cat.* n. 1687.

57. **A. annulatus**, *Forsk. Fl. Æg. Arab.* 173; densely tufted, leaves narrowly linear, sheaths terete, spikes subdigitately fascicled, peduncles glabrous, joints and pedicels slender laxly ciliate, sessile spikelets $\frac{1}{8}$–$\frac{1}{5}$ in., gl. I oblong obtuse or truncate flat or convex 5–9-nerved keels ciliate above not winged glabrous or more or less villous with long spreading hairs, II acute, keel smooth except below, III oblong obtuse glabrous. *Del. Fl. Egypt.* iii. t. 7, f. 2; *Kunth Enum. Pl.* i. 498 (*excl. Syn.*); *Steud. Syn. Gram.* 380; *Hack. Monogr. Androp.* 570; *Wight Cat.* n. 1697; *Aitchis. Cat. Panjab. Pl.* 175; *Duthie Fodd. Grass. N. Ind.* 33, t. 20; *Benth. Fl. Austral.* vii. 531; *Boiss. Fl. Orient.* v. 463. A. Bladhii, *Retz. Obs.* ii. 27; *Kunth l. c.* 498; *Trin. Sp. Gram. Ic.* t. 325; *Roxb. Fl. Ind.* i. 259; *Wight Cat.* n. 1698; *Aitchis. l. c.*; *Duthie Grass. N.W. Ind.* 19, A. comosus, *Link Enum. Hort. Berol.* i. 239. A. garipensis, *Steud. l. c.* 379. A. Ischæmum, *Roxb. ex Wight Cat.* n. 1697. A. obtusus, *Nees*

in Hook. & Arn. Bot. Beech. Voy. 243 (*excl. Syn. Roxb.*). A. scandens, *Roxb. l. c.* 258; *Kunth l. c.* 498; *Grah. Cat. Bomb. Pl.* 238; *Dalz. & Gibs. Bomb. Fl.* 301; *Duthie l. c.* 21. Lepeocercis annulata, *Nees Fl. Afr. Austr.* 98.—Andropogon, *Wall. Cat.* n. 8810 C. E. G.

Throughout the hills and plains of INDIA, from Kashmir westward to Bengal and southward (not in Ceylon).—DISTRIB. Trop. Africa, China, Australia, Pacific.

Stems usually woody at the base with strong wiry roots and tufted leaves, then geniculately ascending, 6–36 in.; nodes bearded or not. *Leaves* 3–12 in., rigid, glaucous, glabrous or hairy above with tubercle-based hairs, margins scabrid; sheath bearded at the tip; ligule oblong, obtuse. *Spikes* 1–2½ in., straight or flexuous, usually inclined, pinkish or nearly white, joints and pedicels = ½ the spikelets, slender, rigid, margins shortly ciliate. *Spikelets* very variable in size, closely imbricating; callus shortly bearded; gl. I thin, nerves strong or faint, not reaching the tip; II lanceolate, 3-nerved, glabrous or ciliolate; III narrow, glabrous; IV awn ¾–1 in., column scabrid. *Pedicelled spikelets* about = the sessile; gl. I obtuse or acute, 7-11-nerved, keels bristly; II narrower, 3-nerved; III ciliate; IV minute or 0.—A very common Indian grass, of which Hackel distinguishes three Indian varieties, to which I have added a fourth :—

Var. *genuinus*; spikes 3–10, gl. I of sessile spikelets beset with rigid tubercle-based hairs, of pedicelled dorsally hairy all over.

Var. *decalvatus*; gl. I of sessile spikelets glabrous, of pedicelled often papillose.

Var. *Bladhii*; spikes many, lower long-stipitate, gl. I of sessile spikelets glabrous or loosely hairy.

Var. *papillosus*; spikes 3–8 decurved, gl. I of sessile spikelets with a transverse row of tubercle-based hairs below the tip. A. papillosus, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 457; *Hack. l. c.* 573.—Behar on Parusnath, *Clarke.*—Afr. trop.

58. **A. Clarkei,** *Hack. in Œsterr. Bot. Zeitschr.* xli. (1891) 49; annual, very slender, much branched, leaves 2–4 in. linear-lanceolate, spikes solitary on capillary peduncles from spathiform sheaths, joints and pedicels slender silkily villous sulcate, spikelets subdistichous, sessile silkily villous with white hairs, gl. I elliptic-oblong flat truncate 2-toothed, keels scaberulous, IV a simple awn, gl. I of pedicelled spikelets rather larger narrower red-brown glabrous.

BEHAR; on Parusnath, alt. 4200 ft., *Clarke.*

Stems 12–18 in., leafy, nodes bearded. *Leaves* flat, finely acuminate, base contracted, quite smooth, nerves very slender; sheaths long, slightly tumid, mouth contracted; ligule of hairs. *Spikes* ⅔–1 in. long, flattened, joints and pedicels sulcate, slender. *Spikelets* 6–8 pairs; two lowest pairs neuter. *Sessile spikelets* ⅛ in.; callus very short; gl. I thinly chartaceous, 7-nerved, margins narrowly inflexed; II narrowly cymbiform, acuminate, 3-nerved, margins ciliate; III oblong, obtuse, hyaline, ciliate; IV the slender awn ½–1 in. long. *Pedicelled spikelets* ⅕ in., dark brown; gl. I obtuse or emarginate, many-nerved; II 3-nerved; III smaller.—The white sessile and dark pedicelled spikelets are a marked feature.

59. **A. armatus,** *Hook. f.*; annual, tufted, erect, leaves linear copiously hairy, spikes 2–5 subdigitate long-peduncled, joints and pedicels slender not grooved, spikelets 10–20 pairs, gl I of sessile oblong obtuse sometimes alveolate dorsally densely silky below the middle keels ciliate, IV a simple awn, gl. I of pedicelled spikelet armed with spreading submarginal tubercle-based bristles twice or thrice its own length.

The CONCAN, *Stocks.*

Stems 12–18 in., as thick as a sparrow's quill, simple or branched above; nodes bearded. *Leaves* 4–6 by ⅙–¼ in., flaccid, nerves slender, base rather contracted, softly hairy on both surfaces and with long tubercle-based bristles at the base;

sheaths lax, upper smooth pale spathiform; ligule 0. *Spikes* $\frac{1}{2}$–$1\frac{1}{2}$ in., flexuous, nodding or cernuous silvery-green, lowest pairs of spikelets male; peduncles $\frac{1}{6}$–$\frac{1}{3}$ in., capillary, axils with whorls of long white hairs; rachis and pedicels slender, terete, silkily ciliate, upper hairs long. *Sessile spikelets* $\frac{1}{8}$ in.; callus very short, silkily bearded; gl. I thin, pale, nerveless, with often a large deep dorsal pit, margins narrowly incurved; II acute, nerveless, dorsally silkily villous; III oblong or linear, flat, hyaline, obtuse, nerveless; IV, awn about 1 in., slender, nearly smooth, base acute. *Pedicelled spikelets* $\frac{1}{5}$ in. rather narrower than the sessile; gl. I slightly convex, quite smooth between the bristles, keels ciliate, many-nerved; II ovate-oblong, 3-nerved, ciliate; III oblong, obtuse, eciliate; IV very narrow.

60. **A. mucronatus,** *Anderss. ex Hack. Monogr. Androp.* 577; stem tall stout, internodes alternately flattened, sheaths terete, leaves linear-lanceolate acuminate pubescent, spikes 5–10 flabellately panicled, sessile spikelets $\frac{1}{5}$ in. twice as long as the joints and ciliate pedicels, callus hairs half as long as the glumes, gl. I coriaceous obovate-lanceolate obtuse glabrous shining 6-nerved pitted in the middle, keels setose above the middle, II as long lanceolate acute glabrous except the ciliate margin 3-nerved, IV a stout awn, gl. IV of pedicelled spikelets awned or mucronate.

INDIA? *Hugel.*

Stem 3-4 ft. or taller, simple, nodes 4, bearded. *Leaves* flat, base fimbriate; sheaths smooth; ligule rounded, ciliolate. *Spikes* solitary or opposite, shortly peduncled, lower pair of spikelets male. *Spikelets* yellow-green; gl. I not hyaline at the tip; II obscurely keeled, dorsally shining; III linear-lanceolate, nerveless, ciliate; IV awn $\frac{3}{4}$ in. long, stout; palea minute. *Pedicelled spikelets* rather longer and broader than the sessile; gl. I obliquely elliptic-oblong, violet-colrd., keels setosely ciliate nearly to the base, 13-nerved; II narrower, lanceolate, acute, 5-nerved, ciliate; III obovate-oblong, 1-nerved, ciliate; IV as long, linear, 1-nerved, glabrous.—Description from Hackel, who says it is a peculiar species, not allied to the preceding, but rather to *A. polyptychus.*

** *Gl. IV of sessile spikelet 2-fid, awned in the cleft.*

61. **A. polyptychus,** *Steud. Syn. Gram.* 380; stem slender erect simple or branched below only, leaves erect strict softly hairy acuminate, sheaths subcompressed, spikes 4–6 digitate simple or forked, joints and ciliate pedicels half as long as the sessile spikelets, gl. I of sessile spikelets narrowly elliptic-oblong obtuse 4–7-nerved nearly flat glabrous, margins narrowly incurved, keels strongly ciliate above, II as long mucronate 3-nerved ciliate, IV very narrow with 2 setaceous or lanceolate lobes. *Thwaites Enum. Pl. Zeyl.* 367; *Trim. Cat. Ceyl. Pl.* 108; *Hack. Monogr. Androp.* 578.

CEYLON; at Pedrotallagalla, alt. 7000 ft., *Thwaites.*

Stems densely tufted, 2–3 ft., as thick as a crow-quill below, smooth. *Leaves* 8–16 in. by $\frac{1}{10}$–$\frac{1}{4}$ in., rigid, erect; ligule short, rigid. *Spikes* usually 3, very fragile, 2 in. long, shortly peduncled, joints and pedicels not furrowed; axils hairy; spikelets closely imbricate, lowest pair male or neuter. *Sessile spikelets* $\frac{1}{5}$ in., callus very short, shortly bearded; gl. I not winged, sometimes depressed on the median line; II 3-nerved, glabrous except the margins, acute or aristulate; III oblong-lanceolate, acute, 1-nerved; IV rather shorter, nearly glabrous, awn $\frac{1}{2}$–$\frac{3}{4}$ in. very slender; palea minute, broadly ovate, ciliate. *Pedicelled spikelets* broader than the sessile; gl. I convex, many-nerved, narrowly winged on one side, tip membranous, keels ciliate; II oblong, acute, 1-nerved, ciliate; III and IV small, oblong, obtuse, 1-nerved, shortly ciliate.

62. **A. nitidulus,** *Hook. f.*; annual, very slender, branched, leafy, leaves long narrow flaccid scaberulous base contracted, spikes very few very unequal on a long capillary peduncle white, rachis tenacious, sessile spikelets ovate-oblong 9-nerved dorsally flat glabrous or scabrid towards the hyaline truncate tip, keels ciliate towards the tip, II 5–7-nerved acuminate, IV short broadly 2-lobed, awn very slender.

N.W. HIMALAYA; on the Sewalik Hills; and Chanda in the CENTRAL PROVINCES, *Duthie*.

Stems 3–4 ft., loosely tufted, very slender from the naked base upwards, nodes glabrous. *Leaves* 8–12 by $\frac{1}{6}$–$\frac{1}{4}$ in., acuminate, thin, margins scaberulous ciliate towards the base, midrib slender smooth, nerves very slender; sheath smooth; ligule oblong, membranous, ciliate. *Spikes* quite white, the terminal on the peduncle 1–1$\frac{1}{2}$ in., lower rather distant, sessile, much shorter; peduncle 4–8 in.; joints and pedicels = about $\frac{3}{4}$ the sessile spikelet, very slender, ciliate with long white silky hairs, tips truncate, joints terete, pedicels flattened (almost as in Sect. *Amphilophis*). *Spikelets* few, in rather distant pairs, homogamous pairs one or two. *Sessile spikelets* $\frac{1}{6}$ in., callus very short, stellately bearded with white hairs; gl. I thin, greenish, dorsally polished, margins narrowly incurved; II chartaceous lanceolate, 5–7-nerved, margins broadly incurved, ciliate; III smaller, lanceolate, 2-nerved, ciliate; lobes of IV ovate, acute, divergent, ciliate; awn about $\frac{1}{2}$ in., slender, column quite smooth. *Anthers* short. *Pedicelled spikelets* rather longer than the sessile, narrowly lanceolate, green, neuter; gl. I membranous, 9-nerved, glabrous, margins incurved, ciliate towards the tip only; II 7-nerved; III rudimentary or 0.

Subgen. X. HETEROPOGON, *Hack.* *Spikes* solitary, joints many and pedicels not channelled; lowest pairs or 2–8 pairs of spikelets closely imbricate, male or neuter. *Sessile spikelets* subcylindric, gl. I subcylindric or oblong, II obtusely keeled, not awned; III hyaline; IV a long awn with a stout column and often a hyaline base. *Pedicelled spikelets* very unlike the sessile and concealing them.

* *Ligule membranous; column of awn hirsute; callus of sessile fem. spikelets pungent.*

63. **A. contortus,** *Linn. Sp. Pl.* 1045; leaves scabrid above, ligule truncate ciliolate, spikes 1$\frac{1}{2}$–3 in., sessile fem. spikelets $\frac{1}{4}$ in., callus long rufous-bearded, gl. I dorsally flat, margins smooth involute, awn 3–5 in., pedicelled spikelets $\frac{1}{3}$–$\frac{2}{3}$ in., gl. I obliquely lanceolate obtuse. *Lamk. Encyc.* t. 840; *All. Fl. Pedem.* 260, t. 91; *Kunth Enum. Pl.* i. 486; *Steud. Syn. Gram.* 367; *Hack. Monogr. Androp.* 585 (*excl.* A. polystachyus, *Roxb.*); *Roxb. Fl. Ind.* i. 253; *Grah. Cat. Bomb. Pl.* 238; *Dalz. & Gibs. Bomb. Fl.* 300; *Wall. Cat.* n. 8800; *Wight Cat.* n. 1688, 2321, *in part*; *Baker Fl. Maurit.* 444. A. Allionii, *DC. Fl. Franc.* iii. 97. A. messanensis, *Biv. Pl. ined.* 5. A. Bellardi, *Bub. in Nuov. Giorn. Bot. Ital.* (v. 1873) 317. A. besukiensis, *Steud. l. c.* 307. Heteropogon Allionii, *Roem. & Sch. Syst.* ii. 835; *T. Nees, Gen. Fl. Germ. Monocot.* i. 94; *Reichb. Ic. Fl. Germ.* t. 53. H. contortus, *Beauv. ex Roem. & Sch. l. c.* 836; *Benth. Fl. Austral.* vii. 517; *Aitchis. Cat. Panjab. Pl.* 176; *Duthie Grass. N. W. Ind.* 19, *Fodd. Grass. N. Ind.* 32, t. 19. H. firmus, *Presl. Rel. Hænk.* i. 334. H. glaber, *Pers. Syn.* ii. 533; *Beauv. Agrost.* 24, t. 23, f. 8. H. hirtus, *Pers. l. c.*; *Thw. Enum. Pl. Zeyl.* 368; *Trim. Cat. Ceyl. Pl.* 107; *Benth. Fl. Hongk.* 424. H. hirsutus, *Beauv. Agrost.* 134. H. hispidissimus, *Steud. Syn. Gram.* 367. H. Hohenackeri, *Hochst. ex Miq. Anal. Bot. Ind.* iii. 24. H. messanensis, *Guss. Fl. Sic. Syn.* i. 164. H. polystachyus, *Nees Agrost. Bras.*

364; *Wight Cat.* n. 2321 (*non Roxb.*). H. Roxburghii, *Arn. ex Nees in Nov. Act. Nat. Cur.* xix. *Suppl.* i. (1843) 183.

Throughout INDIA, BURMA, and CEYLON to the Straits of Malacca, ascending the Himalaya to 5000 ft.—DISTRIB. Mediterranean region and tropics generally.

Stems 1–5 ft., erect or decumbent below, densely tufted, simple or fastigiately branched, compressed towards the base. *Leaves* 6–18 in., narrow, glabrous or hairy especially near the base, rather glaucous, rigid, margins and upper surfaces scabrid; sheaths compressed, keeled. *Spikes* with the lower 2–6 pairs of spikelets male with coherent joints; joints of upper (fem.) portion very short and curved callus bearded with brown hairs. *Sessile* (*fem.*) *spikelets* ¼ in.; gl. I coriaceous, glabrous or hispid, many-nerved, tip membranous; II coriaceous, 3-nerved; III oblong, hyaline, embracing the long slender ovary, tip ciliate; IV awn stout, column hirsute. *Pedicelled spikelets* ⅓–½ in.; pedicel very short; gl. I lanceolate, obliquely twisted, herbaceous, keels margined or unequally winged; II membranous, acute, 3-nerved, ciliate; palea minute, ciliate. *Sessile spikelets* of the homogamous pairs, like the pedicelled, more or less covered with tubercle-based hairs.—Hackel has 2 varieties and 5 subvarieties (excluding *polystachyus*) of this widely distributed plant, founded chiefly on the number and position of the tubercle-based bristles of the male spikelet. They appear to me to be too inconstant for definition.

64. **A. melanocarpus,** *Ell. Sketch. Bot. S. Carolin.*, &c., i. 146; tall, stout; leaves scabrid above, sheaths of upper with scrobiculate keels and often nerves, ligule rounded glabrous, spikes ½–1 in., sessile fem. spikelets ⅓ in. terete hirsute, callus long rufous bearded, gl. I dorsally flat, awn 2–4 in., pedicelled spikelets ⅔–1 in. costa scrobiculate. A. polystichus, *Hochst. ex Steud. Syn. Gram.* 369. A. polystictus, *Hochst. in Schimp. Pl. Abyss.* n. 2012. A. scrobiculatus, *Kunth Enum. Pl.* i. 507. A. segænsis, *Steud. l. c.* 367 (*excl. cit. Wall.*) Heteropogon acuminatus, *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1883) 254. H. melanocarpus, *Benth. in Journ. Linn. Soc.* xix. (1881) 71; *Duthie Grass. N.W. Ind.* 19. H. polystictus, *Hochst. in Flora*, xxxix. (1856) 28. H. Roylei, *Nees ex Steud. l. c.* 367. H. scrobiculatus, *Fourn. ex Hack. in Mart. Fl. Bras.* ii. III. 268.

UPPER GANGETIC PLAIN, *Royle*, &c. KUMAON, up to 5000 ft.—DISTRIB. Trop. and subtrop. Afric. and Amer.

Stem 4–6 ft., as thick as a swan's quill below, fastigiately branched above. *Leaves* 1–2 ft. by ¼–¾ in., setaceously acuminate, rigid, green, margins scaberulous, glabrous or with long hairs at the base; sheaths compressed, glabrous, upper spathæform, flattened. *Spikes* green, peduncle stout, in a narrow spathe 3–5 in. long, lower 1–3 pairs of spikelets male or neuter with coherent glabrous joints, upper pairs with fragile bearded joints. *Sessile* (fem. or bisexual) *spikelets* ⅓–½ in., callus long bearded; gl. I obscurely 9-nerved, not furrowed dorsally, margins smooth involute; II coriaceous, linear-oblong 3-nerved, keel hispid; III shorter, oblong, nerveless; IV awn stout, column hirsute. *Pedicelled spikelets* ⅓–½ in., obliquely lanceolate, acuminate, pedicel very short; gl. I many-nerved, glabrous, keels ciliate-serrulate; II lanceolate, acute; III much shorter, nerveless, ciliate; IV minute, linear. *Sessile spikelets* of homogamous pair like the pedicelled.

65. **A. triticeus**, *Br. Prodr.* 201; tall, stout, leaves sparsely hairy, sheaths of upper smooth, ligule very short, spikes 3–6 in., sessile fem. spikelets ½ in. terete, callus long rufous bearded, gl. I dorsally deeply channelled silkily pubescent, awn 3–6 in., pedicelled spikelets ⅔–1 in. smooth. *Hack. Monogr. Androp.* 588; *Steud. Syn. Gram.* 368. A. ischyanthus & liananthus, *Steud. l. c.* 367. Heteropogon insignis, *Thw. Enum. Pl. Zeyl.* 437; *Trim. Cat. Ceyl. Pl.* 107; *Benth. Fl. Austral.* vii. 517.—Andropogon, *Wall. Cat.* n. 8801.

The CONCAN, *Stocks*, *Woodrow*. CENTRAL PROVINCES; Khandwa, *Duthie*. BURMA, at Segaen, *Wallich*. CEYLON; Mateke East, *Thwaites*.—DISTRIB. Malaya, Australia.

Stem 6–10 ft., as thick as a swan's quill below, hard, smooth, leafy. *Leaves* 1–2 ft., narrowly linear, acuminate, glaucous, above and margins scabrid; sheaths compressed, keeled, smooth; ligule ciliate. *Spikes* ⅓–½ in., very stout, green; lower 12–15 pairs of spikelets homogamous, male or neuter, joints very short. *Sessile spikelets* ½ in., cylindric, obtuse, callus long-bearded with rufous silky hairs; gl. I truncate; II obtuse; III glabrous; IV awn hirsute, very stout. *Pedicelled spikelets* ¾ in., green, pedicel very short; gl. I more or less twisted, lanceolate, many-nerved, one keel winged; II linear-lanceolate, margins ciliate; III and IV hyaline, short, glabrous. *Sessile spikelets* of the homogamous pair like the pedicelled.

** *Ligule of hairs; column of awn usually bearded; callus long.*

66. **A. bellariensis,** *Hack. in Flora* (1885) 123; stem tall sheathed to the top, leaves very narrow, sheaths terete, ligule of 2 rows of hairs, spikes 2–2½ in. slender partially sheathed, sessile fem. spikelets ⅙ in., callus acute bearded with white hairs, gl. I linear-oblong dorsally channelled 6-nerved glabrous, awn 1–1½ in. base dilated and 2-toothed, pedicelled spikelets ⅓ in. glabrous. Heteropogon polystachyon, *Arn. in Wight Cat.* n. 2321.

The DECCAN; near Bellary, *Wight* (*Cat.* n. 2321 *in part*).

Stem 2 ft., ascending, branched above, terete, glabrous. *Leaves* 6 in. or more, by ⅛–⅙ in., rigid, green, quite smooth, puberulous above, setaceously acuminate; sheath glabrous. *Spikes* 2–3 in., slender, green, joints and pedicels shortly ciliate, lower 2–4 pairs of spikelets homogamous, male. *Sessile fem. spikelets* pale, callus straight pungent; gl. I chartaceous, glabrous, 6-nerved margins narrowly inflexed, keels scabrid, tip entire hyaline; II oblong-lanceolate, obtuse, 5-nerved, margins inflexed; III linear, nerveless, glabrous; IV awn stout, column ciliate with white hairs. *Pedicelled spikelets* ⅓ in., lanceolate, shortly pedicelled; gl. I lanceolate, 7-nerved, glabrous; II narrower, 5-nerved, ciliate; III and IV very narrow, glabrous. *Sessile spikelet* of *homogamous pair* like the pedicelled.

67. **A. Ritchiei,** *Hook. f.*; leaves scabrid, ligule a row of stiff bristles connate below, spikes ⅔–1 in. green, hispid, sessile fem. spikelets ⅕ in., callus short hirsute, gl. I oblong, terete rufous villous dorsally not channelled, nerves obscure, IV awn 1½–2 in. scabrid base acute, pedicelled spikelets ¼–⅓ in. very shortly pedicelled green, gl. I narrowly lanceolate acuminate many-nerved and with a marginal series of long spreading golden tubercle-based bristles.

The DECCAN; Belgaum, *Ritchie*.

Stem 4–6 ft. (one only seen). *Leaves* 1 ft. by ⅓ in., coriaceous, linear from a narrow base, acuminate, flat, rigid, shortly hairy on both surfaces hairs fine tubercle-based, margins spinulosely serrulate; sheath smooth; ligule membranous? *Spikes* with peduncles shorter than the very narrow sheaths, stout; lower 1–2 pairs of spikelets homogamous. *Sessile fem. spikelets* softly villous; gl. I not channelled dorsally; II linear, 3-nerved, with a coriaceous hispid centre and membranous wings; III smaller, hyaline, nerveless; IV awn slender, tortuous, red brown, column pubescent. *Pedicelled spikelets* male, pedicels very short glabrous, gl. I narrowly equally winged, glabrous, except for the bristles, II lanceolate, 3-nerved; IV oblong, hyaline.—I have seen only the top of a branch with a single leaf of this remarkable species. The ligule is imperfect.

68. **A. oliganthus,** *Hochst. ex Steud. Syn. Gram.* 368; dwarf, annual, leaves subensiform acuminate softly hairy margins thickened, spikes short,

joints and pedicels about half as long as the sessile spikelet long-ciliate, sessile spikelet $\frac{1}{5}$ in. oblong, callus short obtuse, gl. I obtuse chartaceous dorsally villous toward the base not dorsally channelled shining faintly-nerved keels ciliolate towards the truncate tip, II obtuse apiculate, III very short broadly oblong ciliate, IV column of awn glabrous. *Hack. Monogr. Androp.* 591.

Nilghiri Hills; *Wight, Hohenacker*, &c.

Stems 3–6 in., tufted, slender, sometimes creeping below, geniculate. *Leaves* 2–3 in., quite flat, margins cartilaginous; sheaths compressed; ligule very short, membranous. *Spikes* usually very shortly exserted from the long narrow glabrous spathes; peduncle curved, puberulous. *Spikes* $\frac{1}{3}$–$\frac{2}{3}$ in. long, with 3–6 pairs of glumes, lower spikelets neuter. Gl. I of *sessile spikelets* with narrowly involute margins, callus bearded; awn of IV $1\frac{1}{2}$ in. long, shining. *Pedicelled spikelet* larger than the sessile; gl. I obovate-oblong, obtuse, many and strongly nerved, margins ciliolate hardly incurved: II smaller, membranous, obtuse, 1–3-nerved, ciliate; palea of IV very small.—Hackel observes that this species is intermediate between *Dichanthium* and *Heteropogon*, but nearer the latter in the dorsal furrow of the sessile spikelet (which furrow I do not detect).

69. **A. polystachyos,** *Roxb. Fl. Ind.* i. 261; dwarf, erect, corymbosely branched, leaves slender short erect strict hairy, spikes $\frac{1}{2}$–1 in. on slender strict naked peduncles, sessile fem. spikelets $\frac{1}{5}$ in., callus densely bearded on one side with brown hairs, gl. I terete pubescent, awn $1\frac{1}{2}$–2 in. base simple acute, pedicelled spikelets oblong many-nerved broadly winged glabrous. *Steud. Syn. Gram.* 367. A. pumilus, *Roxb. Ic. ined.* t. 2021 (*non Fl. Ind.*).

Peninsula of India, *Roxburgh, Wight.*

Stem 6–10 in., slender, leafy above. *Leaves* 2–4 by $\frac{1}{20}$–$\frac{1}{18}$ in., lower flat, upper convolute, acuminate, ciliate with long flexuous hairs, margins thickened; sheaths terete, lower keeled; ligule a line of hairs. *Spikes* pale brown (when dry), peduncle 2–4 in., with a very slender sheath and minute leaf about the middle; 5 or 6 lowest pairs of spikes neuter. *Sessile fem. spikelets* dark; gl. I rigid, many-nerved; II linear, coriaceous with broad hyaline margins; III shorter, oblong, ciliate; IV awn rather slender, column shortly hirsute. *Pedicelled spikelets* $\frac{1}{4}$ in.; gl. I with a coriaceous many-nerved centre and broad hyaline infolded wings; II lanceolate, ciliate, 5-nerved, 2 pairs submarginal. *Neuter spikelets*; gl. I like the pedicelled, but broader, tip 2-toothed; II lanceolate, 3-nerved, ciliate; III and IV oblong, 1-nerved, ciliate.—A curious little species, of which I have seen only indifferent specimens of Wight. In Roxburgh's Icones this and *A. pumilus*, Roxb., are figured on the same sheet with the names transposed. *Heteropogon polystachyon*, Arn. (Wight Cat. 2321) under which is cited Roxburgh's *A. polystachyon* is *A. bellariensis*, Hack.

Subgen. XI. Cymbopogon, *Hack.* *Spikes* 2, both sessile or a sessile and shortly stipitate terminating a peduncle which is more or less sheathed by a proper spathe, often divaricate or deflexed; joints and pedicels plano-convex, clavate bucciniform or linear, top concave with usually dilated toothed margins. *Spikelets* several pairs, lowest pair or pairs of one or both spikes homogamous, male or neuter; sessile spikelets fem. or bisexual, oblong to lanceolate, dorsally compressed; gl. I dorsally flat excavate or pitted, awnless, margins inflexed; II cymbiform, acute, keeled, awned or not; III oblong, hyaline, nerveless or 2-nerved; IV smaller, narrow, hyaline, 2-cleft, awned in the cleft, awn capillary, rarely 0; palea minute or 0. *Pedicelled spikelets* male or neuter, dorsally strongly compressed.

A. Column of awn of gl. IV glabrous (rarely awn 0).

* Peduncle of spikes shorter than the proper spathe.

† Joints of spikes and pedicels of upper spikelets copiously villous on the sides and back, hairs more or less concealing the sessile spikelet.

70. **A. Iwarancusa,** *Jones in Asiat. Research.* iv. (1795) 109; stem short or tall, leaves flat or convolute, panicle subsimple or decompound, joints of rachis and pedicels of upper spikelets subclavate tops toothed, sessile spikelets ⅙–¼ in. linear-lanceolate acute, gl. I dorsally flat glabrous, keels scaberulous or ciliolate.

Plains of N.W. INDIA, from the Jumna westwd., and southwd. to Scind. The WESTERN HIMALAYA, from Kashmir to Kumaon, and WESTERN TIBET, ascending to 8000 ft. N. CANARA and the DECCAN.—DISTRIB. Westwd. to N. Africa.

Stems tufted, on an annulate creeping rootstock, 6 in. to 6 ft. high; whole plant usually of a pale often glaucous green. *Leaves* 6 in.–2 ft., narrowly linear, tips capillary, rigid or flexuous, glabrous or scaberulous, glaucous or pruinose beneath, midrib slender; sheaths glabrous, lower dilated; ligule shortly oblong, membranous, ciliolate. *Panicle* very variable, branches distant or crowded, subsimple or much densely or loosely branched; proper spathes ⅓–⅔ in., longer than the peduncle of the spikes, narrowly lanceolate. *Spikes* ¼–¾ in., unequal; spikelets 3–4 pairs. *Sessile spikelets* pale, sometimes reddish; gl. I thin, keels hardly margined not winged, nerves 0 or 2–4 between the carinal; II cymbiform, acute, 3-nerved; III 2-nerved; IV narrow, lobes subulate, ciliate. *Pedicelled spikelets* as long as or rather longer than the sessile, purplish, narrowly lanceolate; gl. I 7–9-nerved, keels scaberulous; II margins ciliate; III broadly oblong, hyaline, fimbriate.—Roots aromatic. There are no limits between *A. Iwarancusa* and *laniger*. The former is usually the larger plant, with broader leaves and often split sheaths, and is the most Eastern form. The authority for the name *Iwarancusa* as a specific one is not very clear. Blane describing his *Nardus indica* says that Sir J. Banks regarded it as a species of *Andropogon*. Jones incidentally gives *Irawancusa* as the specific name; possibly he may have taken it from Banks.

Subsp. 1. A. IWARANCUSA proper; tall, much branched, leaves long flat, lower sheaths deciduous splitting into flat often tortuous laminæ, panicle narrow compound. *Kunth Enum. Pl.* i. 493; *Steud. Syn. Gram.* 388. *Hack. Monogr. Androp.* 599; *Roxb. Fl. Ind.* i. 275; *Ainslie Mat. Med. Ind.* ii. 114; *Wall. Cat.* n. 8793; *Trin. Sp. Gram. Ic.* t. 326; *Duthie Grass. N.W. Ind.* 19. Cymbopogon Iwarancusa, *Schult. Mant.* ii. 458.—Nardus indica, *Blane in Phil. Trans.* lxxx. (1790) 284, t. 16.—Common in N. India. I have seen no N. African specimens with the lower leaf-sheaths of this form, a character which is, however, very inconstant.—Khuskus grass.

Subsp. 2. A. LANIGER, *Desf. Fl. Atlant.* ii. 379; stem short subsimple, leaves junciform, lower sheaths hardened persistent, panicle narrow subsimple. *Kunth Enum. Pl.* i. 493; *Steud. Syn. Gram.* 386; *Hack. Monogr. Androp.* 598; *Aitchis. Cat. Panjab. Pl.* 174; *Duthie Grass. N.W. Ind.* 20, *Fodd. Grass. N. Ind.* 35, t. 23; *Lisboa in Bomb. Journ. Nat. Hist. Soc.* vi. (1891); *Boiss. Fl. Orient.* vii. 465. A. Arriani, *Edgew. in Journ. Linn. Soc.* vi. (1862) 208 (Ariani). A. circinnatus *Hochst. & Steud. ex Steud. l. c.* 387. A. criophorus, *Willd. Sp. Pl.* iv. 90. A. Olivieri, *Boiss. Diagn.* v. 76; *Steud. l. c.* 387. A. commutatus, *Aitchis. in Journ. Linn. Soc.* xix. (1882) 191 (*non Steud*). Cymbopogon arabicus, *Nees ex Steud. l. c.* C. circinnatus, *Hochst. in Schimp. Pl. Arab. exsicc. Ed.* 2 (1844) n. 783. C. Arriani, *Aitchis. l. c.* C. laniger, *Duthie in Atkins. Gaz. N.W. Ind.* 640. Gymnanthelia lanigera, *Anderss. in Schweinf. Beit. Fl Æthiop.* 300.—*A. laniger* is the N. African form of the species, also common in N. India. Edgeworth's *A. Arriani* is certainly this. The *A. commutatus* of Affghanistan and Scind (*Stocks*) is also this; whether the African plant of that name is the same is doubtful. I have not seen the Scind specimens of *A. commutatus* alluded to by Hackel (Monogr. 613); it is not probable that they differ from Stocks' plant.

†† Joints of spikes and pedicels of upper spikelets villous or ciliate on the sides, hairs not concealing the sessile spikelets, dorsally glabrous or sparsely rarely copiously hairy.

§ *Leaf-sheaths terete.*

71. **A. Schœnanthus,** *Linn. Sp. Pl.* 1046; sessile spikelets ovate- or obovate-oblong dorsally flat or nearly so with a deep narrow longitudinal cleft in the centre usually below the middle and answering to a ventral median rib, keels narrowly winged from or from above the middle, II acute keel with a serrulate wing above the middle; *Kunth Enum. Pl.* i. 493; *Grah. Cat. Bomb. Pl.* 238; *Duthie Grass. N. W. Ind.* 21, *Fodd. Grass. N. Ind.* 38, t. 26.

Hotter parts of INDIA, wild or cultivated, from the Panjab to Burma and southwd. to Travancore and CEYLON.—DISTRIB. Westwd. to tropical Africa.

Annual? *Stem* 3–6 ft., erect. *Leaves* long, broad or narrow, finely acuminate glaucous or pruinose, smooth or margins scaberulous, base rounded or cordate and amplexicaul; sheath glabrous; ligule oblong, scarious. *Panicle* elongate, 1–2 ft. long, dense or lax, compound or decompound, rarely subsimple; proper spathes as long as the spikes, which are as long as the peduncle or shorter. *Spikes* unequal, one 3–4-jointed, the other 4–6-jointed; joints and pedicels narrowly clavate, half as long as the sessile spikelet, tips dilated and toothed, margins villously ciliate with long hairs. *Sessile spikelets* $\frac{1}{7}$–$\frac{1}{6}$ in., callus obtuse shortly bearded; gl. I tip obtuse often irregularly toothed, dorsally 2-nerved or nerveless; II lanceolate, 3-nerved, ciliate, III oblong, ciliate; IV small, narrow, 2-fid, lobes subulate glabrous or ciliate; awn slender, twice as long as the gl. or longer. *Pedicelled spikelets* oblong-lanceolate, acute or obtuse; gl. I glabrous or puberulous, keels hardly ciliate; II ovate, acute, 3-nerved; III oblong, ciliate, 2-nerved.—As in the case of *A. Nardus*, this grass has been so extensively cultivated in India that it is impossible to say where it is wild, and its synonymy is so mixed up with that of *A. Nardus*, and the descriptions of both are so inexact, that until the whole subject of their culture and distribution has been botanically investigated by a skilled observer in various parts of India, their history must remain obscure. Botanically, *A. Schœnanthus* is remarkable for the extraordinary difference between its broad and narrow leaved varieties. Some forms of the narrow leaved closely resemble states of *A. Nardus*, and can only be distinguished from it by the narrow cleft in the centre of gl. I of the sessile spikelet and its corresponding rib in the ventral face of that glume. The figure given by Ventenat (Hort. Cels. t. 89) is unreliable for any grass. I give below Hackel's classification of the varieties with their synonymy, adding one which he does not appear to have seen. I am quite unable to distinguish his vars. *genuinus* and *versicolor*.—"Geranium grass, Rusa oil grass, Oil of Ginger grass." Watt.

Subsp. *genuinus*, Hack. l. c. 609; panicle linear-oblong, secondary branches usually simple, spikes $\frac{1}{3}$–$\frac{3}{4}$ in., dorsal cleft of gl. I hardly reaching the middle of the gl., gl. IV cleft $\frac{1}{3}$–$\frac{1}{2}$ way down, awn perfect, pedicelled spikelets glabrous. *Wall. Cat.* 8794 L.

Var. *Martini*, leaf-base cordate and $\frac{1}{2}$-amplexicaul, spathes and spikelets pale or spikelets reddish. A. Schœnanthus, *Linn. l. c.*; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* iv. (1889) 120. A. Martini, *Roxb. Fl. Ind.* i. 277; *Aitchis. Cat. Panjab. Pl.* 175; *Wight. Cat.* n. 1702. A. giganteus, *Hochst. in Flora* (1844) 242. A. nardoides *a*, *Nees Fl. Afr. Austr.* 116. A. pachnodes, *Trin. in Mem. Acad. Petersb. Ser.* VI. ii. (1824) 284, *Sp. Gram. Ic.* t. 337. Gymnanthelia Martini, *Anderss. in Schweinf. Beitr. Fl. Æthiop.* 310.

Var. *filiculmis*, Hook. f.; stem 12–16 in., very slender, leaves $\frac{1}{12}$–$\frac{1}{6}$ in. broad, spikes reddish-brown.—Upper Burma, Fort Stedman, *Herb. Hort. Calcutt.*—Probably only a depauperate form.

Var. *versicolor*, Hack. l. c. 610; leaf-base cordate semi-amplexicaul, spathes dull violet and red, spikelets more or less variegated or the pedicelled violet. A. versicolor, *Nees in Wight Cat.* n. 1705; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* iv. (1889) 120, vi. (1891) 65. A. aromaticus, *Sieb. Fl. Maurit.* (*Herb. Exsicc.*) n. 38. A. connatus, *Hochst. in A. Rich. Tent. Fl. Abyss.* ii. 464. A. excavatus, *Hochst. in Flora* (1846) 116. A. foliatus & polyneuros, *Steud. Syn. Gram.* 385, 389. A. nardoides, *β*, *Nees l. c.* A. pachynodes, *β*, *Nees Pl. Meyen.* 190. A. pruinosus, *Nees ex Steud. l. c.* 388. A. Schœnanthus, *Wall. Cat.* 8794 C.N., 8795, *Baker Fl. Maurit.* 446; *Trim. Cat. Ceyl. Pl.* 107; ?*Vent. Hort. Cels.* t. 89. A. versicolor, *Nees ex Steud. l. c.*; *Thw. Enum. Pl. Zeyl.* 367. Gymnanthelia connata, *Aschers & Schweinf. in Schweinf. Beitr. Fl. Æthiop.* 310.

Var. *cæsius*, Hack. l. c.; whole plant more or less glaucous, stem slender, leaves very narrow base not dilated, panicle subsimple, gl. I narrowly winged. ?A. bicornis, *Forsk. Fl. Æg. Arab.* 173. A. cæsius, *Nees in Hook. & Arn. Bot. Beech. Voy.* 244, *in Pl. Meyen.* 189; *Wight Cat.* n. 1700, 1700a. A. Martini, *Benth. Fl. Hongk.* 424. A. Iwarancusa, *Boiss. Fl. Orient.* v. 466. Andropogon, *Wall. Cat.* n. 8796.

Var. *gracillimus*, Hook. f.; glaucous, stem very slender, leaves 2–4 by $\frac{1}{8}$ in., panicle simple, joints of rachis of spikes and pedicels nearly glabrous, gl. I of sessile spikelet truncate dorsal channel deep or shallow. Andropogon, *Wall. Cat.* n. 8796 (*Herb. Wight*). Trachypogon cæsius var. *a*, *Nees in Herb. Wight.*

Subsp. *clandestinus*, Hack. l. c. 612; habit of var. *cæsius*, but gl. I and II of the pedicelled spikelet pubescent. A. clandestinus, *Nees ex Steud. l. c.* 388. Andropogon, *Wall. Cat.* n. 8794 I K.—Burma, *Wallich*; Upper Burma, *Herb. Hort. Calcutt.*

72. **A. Nardus,** *Linn. Sp. Pl.* 1046; stem tall paniculately branched leafy, leaves narrow flat, panicle subsimple to decompound, spikes in densely or loosely compacted sheathed fascicles or subsolitary, joints and pedicels rather slender tips dilated toothed, sessile spikelets $\frac{1}{7}$–$\frac{1}{5}$ in. oblong or lanceolate, gl. I 2-toothed, dorsally flat or with shallow depressions or concave towards the base, margins winged or narrowly margined and scaberulous above the middle.

Throughout the hotter parts of INDIA, BURMA, the MALAY PENINSULA and CEYLON, wild or cultivated.—DISTRIB. Trop. Asia, Africa, Australia.

In its common form it is difficult to distinguish *A. Nardus* from the narrow leaved form of *A. Schœnanthus*, except by the cleft in the gl. I of the sessile spikelet of the latter; and not always very clearly by that. Both are cultivated in India and elsewhere, and *A. Nardus* is (except in foliage never having the broadly cordate leaf-base) quite as variable as its ally. I have been unable satisfactorily to correlate all of the Kew Indian forms with the elaborate classification of varieties established by Hackel. Both his and my conclusions must be regarded as provisional and as certain to be disturbed by a study of additional materials, or by a study of all the forms in their native localities by a specialist who has grasped the history of the species wild and cultivated, over a large area of its distribution. One of Hackel's varieties, *distans*, regarded as a species by Nees, should, I think, be restored to that rank (excluding a Ceylon plant included under it by Hackel); it is exclusively a Himalayan form, not found below 4000 ft., and is very constant in habit and foliage.

The var. *genuinus*, Hack., is founded on an awnless form of the plant, which I believe (with Roxburgh) to be a cultivated state, having seen no awnless specimens in the forms known to be wild. The name is therefore inappropriate botanically, whether or no it represents the first described state of the plant, and better suppressed.

A. NARDUS proper; rootstock stout, stem tall stout leafy, leaves long narrow, panicle large often supra-decompound oblong or subpyramidal more or less interrupted, branches loosely or closely packed erect at length often drooping, spathes laxly or closely imbricate lanceolate, proper spathes $\frac{1}{3}$–$\frac{3}{4}$ in., spikes with 4–5 pairs of spikelets, joints and pedicels rather slender densely or laxly ciliate, sessile spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. lanceolate awned, gl. I narrowly winged, awn long or short. A. Nardus, *Bentl. & Trim. Medic. Pl.* t. 297; *Trim. Cat. Ceyl. Pl.* 107. A. Nardus, *var.* grandis, *Hack.* (*in part*). A. cæsius, *Nees in Wight Cat.* n. 1700c. A. Schœnanthus, *Wall. Cat.* n. 8794 D. E. F. H.—From the Himalaya to Burma and southwd. to Ceylon and Malaya. Mergui, *Griff.* (*Kew Distrib.* 6762). Bengal, *Griff.* (*K. D.* 6760, 6761).

Forma culta; gl. I of sessile spikelet, dorsally flat or deeply hollowed, awn 0 or very short included in the glumes. A. Nardus, *auct. plur.* A. Schœnanthus, *Roxb. Fl. Ind.* i. 274; *Wall. Cat.* n. 8794 E. A. Roxburghii, *Nees in Wight Cat.* n. 1699; *Steud. l. c.* 395. A. Martini, *Thw. Enum. Pl. Zeyl.* 367. A. Nardus, *var.* genuinus, *Hack. Monogr. Androp.* 662 *in part.*

Forma abnormis, spathes empty. A. cæsius, *Nees in Wight Cat.* n. 1700d. Anthistiria, *Wall. l. c.* n. 8768.

Var. *nilagiricus*, Hack. l. c. 604; tall, stem very robust sometimes as thick as the little finger, leaves 2–4 ft. by $\frac{1}{2}$–$\frac{2}{3}$ in. glaucous beneath, ligule coriaceous, panicle 10–12 in. narrow, proper spathes about $\frac{1}{2}$ in. broadly lanceolate cymbiform acuminate, sessile spikelets $\frac{1}{7}$–$\frac{1}{5}$ in. dorsally flat smooth or with shallow depressions hardy winged nerves obscure, lobes of gl. IV subulate, awn short or long. A. nilagiricus, *Hochst. in Hohen. Pl. Ind. Or.* (1851) n. 932. A. confertiflorus, *Steud. l. c.* 385. A. Nardus, var. glomeratus, *Hack. l. c.* A. Schœnanthus, *Wall. Cat.* 8794 B *in part.* Nilghiri Hills, *Wight* (*Herb.* n. 3087) &c.; Conoor, alt. 6000 ft. *Gamble.* Ceylon.—The spathes are normally broader than in *Nardus* proper.

Var. *luridus*, Hook. f.; stem 5–6 ft., leaves long, panicle elongate rather broad decompound branches or narrow with sparingly divided branches, spikes in large rounded crowded fascicles drying of a very dark purplish brown, spathes cymbiform, outer $\frac{1}{2}$–$\frac{1}{4}$ in., proper $\frac{1}{5}$–$\frac{1}{2}$ in. shorter than the purplish black shortly peduncled spikes, pedicels and joints slender sparsely ciliate with long spreading hairs, sessile spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. lanceolate, gl. I dorsally flat or concave especially below, keels winged above the middle, lobes of gl. IV long ciliate.—Nilghiri Hills, *Schmid.* Ceylon, *Gardner*, *Maxwell.*—Thwaites, *A. distans* may be this or *A. nilagiricus.*

Var. *khasianus*, Hack. l. c. (*in part*); tall, leaves 2–3 ft., panicle elongate 1–3 ft. narrow, branches short compound or decompound, spathes narrowly lanceolate outer $\frac{3}{4}$–$1\frac{1}{4}$ in., proper $\frac{1}{2}$–$\frac{3}{4}$ in., spikes $\frac{1}{2}$–$\frac{2}{3}$ in., joints and pedicels slender shortly villous, sessile spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. oblong-lanceolate obtuse, gl. I dorsally flat or with very shallow depressions, very rarely channelled down the centre (as in *A. Schœnanthus*) keels broadly winged above the middle, nerves 2–5 between the keels usually well marked from the middle or above it to near the top, IV rather broadly linear lobes long ciliate. A khasianus, *Munro mss.*—Khasia Hills, alt. 3–5000 ft., *Griffith* (*Kew distrib.* 6759, 6764, 6765); Munnepore, alt. 3500 ft., *Clarke.*—*Wall. Cat.* n. 8794 H. referred here by Hackel has no nerves or wings to gl. I of the sessile spikelets and is, I think, a form of *normalis.*

Var. *grandis*, Hack. l. c. 605 (*in part*); tall, stout, leaves 2–3 ft. by $\frac{1}{4}$–$\frac{1}{2}$ in., panicle narrow loosely branched, branches distant often drooping, outer spathes $1\frac{1}{2}$–3 in., proper spathes 1–$1\frac{1}{4}$ in., joints and pedicels shortly ciliate, sessile spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. oblong-lanceolate obtuse dorsally flat or slightly concave below keels margined or winged above the middle nerves obscure, keel of II sometimes shortly winged above the middle, lobes of gl. IV ciliate, awn $\frac{1}{3}$–$\frac{1}{2}$ in. A. Schœnanthus, *Wall. Pl. As. Rar.* iii. t. 280, *Cat.* n. 8794 (*in part*). ?A. pendulus, *Nees ex Steud. l. c.* 388. —Nepal, *Wallich.* Sikkim, Terai and hot valleys, *J. D. H.*, &c. Bengal, *Griffith* (*Kew distrib.* n. 6773). Rajmahal, *Herb. Hort. Calcutt.*—The very long outer spathes are seen in no other variety, but they are found shortening in some specimens to the ordinary length of *khasianus* and others.

Var. *coloratus*; stem subsimple, leaves chiefly radical $\frac{1}{12}$–$\frac{1}{6}$ in. broad glaucous beneath, branches of panicle few, spathes and spikes densely fascicled red-brown when dry, proper spathes about ¾ in. very narrow, sessile spikelets as in *A. Nardus* proper, of which this is a small state with highly coloured spathes. A. coloratus, *Nees ex Wight Cat.* n. 1703. *Wall. Cat.* n. 8794 B (*in part*).—S. India, *Heyne*, *Wight*.

Var. *flexuosus*, Hack. l. c. 603; stem slender, panicle decompound, branches very slender flexuous almost zigzag, proper spathes about ½ in. narrow divergent, spikes very short with 2–4 pairs of spikelets, joints and peduncles slender laxly ciliate with spreading hairs, sessile spikelets ⅐–⅙ in. lanceolate, gl. I acuminate 2-cuspidate dorsally flat nerveless keels margined scabrid, gl. IV ciliate, awn short. A. flexuosus, *Nees ex Wight Cat.* n. 1704; *Steud. l. c.* 388.—Southern India, *Heyne*, *Wight*.

Var. *microstachys*, Hook. f.; tall, very slender, leaves narrow, panicle very long slender erect bearing few distant solitary or subsolitary erect filiform branches with one or few very small deflexed spikes, sheaths very narrow tubular erect ½–⅔ in., spikes ⅙–¼ in., joints 2–3, pedicels rather stout shortly ciliate, spikelets ⅛–⅙ in. ovate-oblong or -lanceolate, gl. I dorsally flat or concave below the middle, keels margined or winged nerves obscure or 0, IV very narrow lobes ciliate.—Forests of Oudh, *Thompson*. Garo Hills, *Mann*.—A very distinct-looking plant, from the long erect lower branches and narrow sheaths of the very long slender panicle, short spikes and small spikelets. In the Oudh specimen gl. I is rather broadly winged, and awn short; in the Garo one gl. I is scarcely margined and the awn ⅓ in. long. In some respects it approaches 74, *A. microtheca*.

Var. *exsertus*, Hack. l. c. 608; stem not tall slender, leaves very long and narrow, panicle elongate very narrow, branches short distant, spikes few subsolitary long-peduncled, proper spathes about 1 in., spikes ½–1 in., joints 5–6 and pedicels rather slender shortly villous, sessile spikelets ⅕ in. ovate or oblong 2-toothed dorsally flat or slightly concave 1–2-nerved keels margined or shortly winged, IV eciliate awned. A. Schœnanthus, *Wall. Cat.* n. 8794 M.—Hort. Bot. Calc., *Wallich*. Bengal, *Griffith* (*Kew distrib.* n. 6763, *probably Hort. Calc.*).—Probably a form of *A. Nardus* altered by culture.

Var. *Stracheyi*, Hook. f.; tall, slender, leaves long narrow, panicle strict erect very narrow lax-fld., branches short with few spikes, proper spathes about ¾ in. cymbiform, spikes ½–1 in. brown, joints 6–8 and pedicels subclavate shortly ciliate, spikelets ⅙–¼ in. lanceolate or linear-lanceolate, gl. I bicuspidate, dorsally flat or more or less hollowed nerveless keels hardly margined, IV broad lobes elongate strongly ciliate, awn ½ in. A. Martini, *Herb. Strach. & Winterb.* n. 2.—Kumaon, at Kalenath, alt. 6000 ft., *Str. & W.* Kunawur, Pangi, *Stolizka*.

73. **A. distans**, *Nees ex Steud. Syn. Gram.* 387; rootstock 0, roots fibrous, stem 1–2 ft., leaves almost filiform flexuous, proper spathes ⅔–1 in., spikes 1–1½ in. solitary or few together scattered forming a subsimple panicle, joints and pedicels narrowly clavate silkily ciliate, sessile spikelets ⅕–⅓ in. narrowly lanceolate dorsally flat 5–7-nerved between the narrowly winged keels, keels of II winged above the middle, lobes of IV ciliate. *Duthie Grass. N.W. Ind.* 19. A. Nardus *var.* distans, *Hack. Monogr. Androp.* 608.

TEMPERATE HIMALAYA, alt. 4–7000 ft. (to 9000 ft. in Garwhal, *Duthie*), from Kashmir to Kumaon, *Royle*, &c.

A very distinct odoriferous form or species, confined to elevations above 4000 ft. on the Himalaya, conspicuous for its almost simple (not paniculately branched) stems, leaves very narrow and tufted at their bases, distant large pale or reddish long deflexed spikes and very narrow long spikelets with strong nerves on gl. I of the sessile, tips of gl. I of the sessile spikelets more or less, sometimes deeply 2-cuspidate, margins of gl. II pubescent, IV broader than in *A. Nardus* proper with long subulate-lanceolate ciliate lobes.—Specimens collected by Falconer and by Duthie, at 8900 ft. in Garwhal, have filiform flexuous or tortuous leaves. The Ceylon *A. distans*, Thwaites, from Newera Elia, is a much longer leaved plant, has very dark spikes and is a dwarf starved state of *A. nilagirica*, I suspect. Lisboa (Journ. Bomb. Nat. Hist. Soc. vi. (1891) cites *A. distans* as a native of *N. Canara*, but I have no means of confirming the identification.

74. **A. microtheca,** *Hook. f.*; tall, panicle elongate narrow decompound, branches very slender erect elongate, spikes $\frac{1}{6}$–$\frac{1}{4}$ in. solitary rarely fascicled shortly peduncled deflexed, proper spathes $\frac{1}{2}$ in. narrowly lanceolate divaricate, spikes very short, joints few and pedicels clavate or bucciniform mouth toothed margins very shortly ciliate, sessile spikelets $\frac{1}{10}$–$\frac{1}{8}$ in., gl. I ovate-lanceolate or lanceolate dorsally deeply concave with thickened margins, pubescent in the hollow.

EAST NEPAL; hot valleys, alt. 3–4000 ft., *J. D. H.*

Stem 3–4 ft., slender. *Leaves* long, narrow. *Panicle* leafy below; leaves on the flowering branches short, erect, strict, appressed to the branches, bearing in their axils the very small peduncled proper spathes which project horizontally; peduncle of spikes about half the length of the proper spathe and wholly concealed in it, the very small few-fld. spikes alone being exserted; proper spathes $\frac{1}{3}$–$\frac{2}{3}$ in., narrowly lanceolate, acuminate, strict, glabrous. *Gl.* I *of sessile spikelets* variable in breadth, rarely flat dorsally, keels scaberulous above the middle, tip minutely 2-cuspidate; II acute, keel scaberulous below the tip; III ovate-oblong, acute, 2-nerved, ciliate; IV narrow, 2 fid, lobes subulate eciliate, awn $\frac{1}{4}$ in.; palea minute, oblong or orbicular. *Pedicelled spikelets* (sometimes fem.), ovate-oblong, subacute, gl. I 7-nerved, keels scaberulous; II acuminate, 3-nerved; III oblong, obtuse; IV linear, tip 2-fid, 1-nerved nerve excurrent; palea minute, ovate.—The long slender branches of the panicle, with rather distinct spikes, and divergent proper spathes, short stout pedicels and joints, and minute spikelets (the smallest of the Indian *Cymbopogons*) characterize this species. Its nearest ally is *N. Nardus* var. *microstachys*. Munro had given the mss. name of *Hookeri* to it; but it is not his *A. Hookeri* of Bhotan, nor that described by Hackel. The pedicelled spikelets described above are abnormal in being female.

75. **A. Gidarba,** *Ham. ex Wall. Cat.* n. 8797; stem slender subsimple, leaves narrow, panicle narrow elongate, branches rather distant short, joints and pedicels clavate, sessile spikelets $\frac{1}{8}$–$\frac{1}{5}$ in., gl. I linear-lanceolate 2-toothed dorsally deeply concave below the middle with a boss at the base of the cavity, keels scaberulous neither winged nor margined. *Steud. Syn. Gram.* 387; *Hack. Monogr. Androp.* 613; *Duthie Grass. N.W. Ind.* 20.—Andropogon, *Wall. Cat.* n. 8797, 8798 D.

WESTERN HIMALAYA, *Falconer*, &c.; Simla, alt. 7–8000 ft., *Duthie*. BEHAR, at Monghir, *Hamilton*; Gya, *Herb. Calcutt.*

Stem 4–6 ft., erect. *Leaves* 1–2 ft., finely acuminate, glabrous on both surfaces or puberulous above, midrib slender, margins smooth ciliate towards the base; sheath terete, glabrous; ligule short, truncate. *Panicle* very slender, branches simple or the lower divided; proper spathes $\frac{3}{4}$–1 in., narrowly lanceolate, about twice as long as the peduncle. *Spikes* $\frac{1}{2}$–1 in., strict, at length deflexed; joints and pedicels shortly villous. *Sessile spikelets* pale or dark green, with sometimes a dorsal circular pit above the middle, margins raised; II cymbiform, acute, 1-nerved; III lanceolate, 2-nerved; IV narrow, 2-cleft, lobes subulate ciliate; awn $\frac{1}{4}$–$\frac{1}{2}$ in., capillary. *Pedicelled spikelets* rather longer than the sessile, lanceolate, acute, glabrous.—Odour described as terebinthine.

§§ *Leaf-sheaths compressed, keeled.*

76. **A. Hookeri,** *Munro ex Hack. Monogr. Androp.* 614; tall, slender, leaves long linear, panicle linear interrupted, branches suberect nearly simple, proper spathes ⅔–1¼ in., joints and pedicels of spikes stout clavate, sessile spikelets ¼ in. dull violet dorsally deeply concave puberulous keels scabrid.

BHOTAN? *Griffith* (*Kew Distrib.* n. 6767 *ex Hack.*).

Leaves 12–16 by ⅒–⅕ in., rather rigid, smooth, margin scabrid, midrib broad keeled below; ligule obtuse, membranous, glabrous. *Panicle* 12–16 in.; primary branches of 1–2 nodes giving off solitary secondary. *Spikes* subequal, joints and pedicels dorsally glabrous, margins sparsely villous, tips 2–3-lobed. *Sessile spikelets*, gl. I coriaceo-chartaceous, acute, minutely 2-toothed, keels not margined or winged obscurely 2-nerved; II lanceolate, acute, keel scabrid, margin eciliate; IV 2-cleft, lobes slender eciliate; awn about ¾ in. *Pedicelled spikelets* equalling the sessile, linear-lanceolate, glabrous.—I have not recognized the above amongst Griffith's plants in the Kew Herbarium. The Bhotan plant bearing the number 6767 in that Herbarium and named by Munro *A. Hookeri*, is not a *Cymbopogon*, but probably a *Schizachyrium*, in too imperfect a state for determination. Munro has also attached the name *A. Hookeri* to my *A. microtheca*, which was appropriate for a plant first found by myself.

** Peduncle of spikes longer than the proper spathe.

77. **A. lividus,** *Thwaites Enum. Pl. Zeyl.* 367; erect, leaves narrow rigid, spikes long-peduncled, pedicels and joints clavate, sessile spikelets ¼ in., gl. I lanceolate obscurely 2-toothed keels with narrow scaberulous wings, II shortly awned with a dorsal serrulate wing above the middle, IV deeply 2-fid segments villously ciliate. *Hack. Monogr. Androp.* 615; *Trim. Cat. Ceyl. Pl.* 107.

NILGHIRI HILLS, *Schmid.* CEYLON; Mountains, alt. 7000 ft., *Thwaites*, (C.P. 953).

Stems 1–2 ft., tufted, strict, smooth, rigid. *Leaves* 4–6 in., strict, erect, acuminate, strongly nerved, nearly smooth; lower sheaths short; ligule oblong. *Peduncles* 1-4, terminal and axillary; spikes 1–2 in., erect, dull reddish-brown; joints and pedicels about half as long as the sessile spikelet, margins ciliate with silky hairs, tips cupped and toothed. *Sessile spikelet*, callus very short; gl. I flat, glabrous, margins broadly incurved below, nerves obscure; II narrow, ciliate, dorsally rounded; III oblong, ciliate, 2-nerved; IV as long as III; awn very slender, about twice as long as the spikelet; palea 0. *Pedicelled spikelets* as long as the sessile, linear-oblong, subacute, dorsally convex, glabrous, many-nerved, keels scaberulous, margins broadly incurved; II ovate-oblong, acuminate, sub 3-nerved, ciliate; III as in the sessile; IV as long, hyaline.—Schmid's Nilghiri specimen was distributed by Dr. Stahl mixed with *A. pertusus*, which it strongly resembles.

B. Column of awn hirsute.

78. **A. filipendulus,** *Hochst. in Flora*, xxix. (1846) 115; *Steud. Syn. Gram.* 389 (filipendulinus). *Hack. Monogr. Androp.* 634; *Trim. Cat. Pl. Ceylon*, 107. A. finitimus, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 465; *Steud. l. c.*; *Hack. l. c.* 637; *Baker Fl. Maurit.* 446. A. Griffithii, *Munro in Cat. Pl. Griffith, Falconer, &c.* 58 (*ined.*). A. lachnatherus, *Benth. Fl. Austral.* vii. 434. A. procerus, *F. Muell. Fragm.* viii. 124 (*non Br.*). Hyparrhenia finitima, *Anderss. in Schweinf. Beitr. Fl. Æthiop.* 310. Anthistiria fasciculata, *Thw. Enum Pl. Zeyl.* 366.

KHASIA HILLS, *Griffith*, *Clarke*. CEYLON; Badulla district, alt. 3000 ft., *Thwaites*.—DISTRIB. Trop. Asia, Afr., and Austral.

Stems 3–4 ft., erect, leafy, subsimple or branching from the base, nodes glabrous. *Leaves* 2–3 ft. by $\frac{1}{10}$–$\frac{1}{6}$ in., linear, setaceously acuminate, scaberulous or smooth, margins scabrid; sheath terete, smooth, glabrous or mouth hairy; ligule short, membranous. *Panicle* 1–2 ft., narrow, compound, branches slender, nodes glabrous or pubescent. *Spathes* 1–3 in., linear-lanceolate, acuminate, or tips setaceous, glabrous ciliate or hairy. *Peduncle* much shorter than the spathe, bearded above with white hairs. *Spikes* $\frac{1}{2}$–$\frac{2}{3}$ in., one subsessile with one pair of homogamous spikelets, the other $\frac{1}{10}$–$\frac{1}{8}$ in. long with two (rarely 0) homogamous pairs; heterogamous spikelets 1–3 pairs; joints and pedicels very short, linear, ciliate or villous, tips very oblique. *Gl. I of sessile spikelets* $\frac{1}{4}$–$\frac{1}{3}$ in.; callus acute, bearded; gl. I membranous, truncate, 5–7-nerved, glabrous or villous, dorsally slightly channelled or not; II oblong, obtuse, keel glabrous or ciliate, 3-nerved; III linear-oblong, obtuse, hyaline, ciliate; IV shorter, 2-toothed, glabrous; awn 2–2$\frac{1}{2}$ in., column hispid with rufous hairs. *Pedicelled spikelets* linear-lanceolate, gl. I acute, 7–9-nerved, keels setulose; II oblong, keeled; III and IV hyaline or 0.—*Homogamous spikelets* not awned.—Hackel has 4 varieties under *A. filipendulus*, depending chiefly on the relative length of the spathe and peduncle, and the number 1 or 2 of the heterogamous spikelets. Of these γ. *Thwaitesii* is the Ceylon plant, with one pair of heterogamous and two of homogamous on the stipitate spike. *A. finitimus* has normally 2–3 pairs of heterogamous spikelets on each spike.—These and two other African species, *A. Barteri*, Hack., and *A. familiaris*, Steud., are very closely allied, and regarded by Hackel as probably subspecies of *filipendulus*.

DOUBTFUL AND EXCLUDED SPECIES OF *Andropogon*.

A. CITRATUS, *DC. Cat. Hort. Monsp.* 78, *name only*.—May be either *A. Nardus* or *A. Schœnanthus*, ex Hack. Monogr. Androp. 608.

A. CYMBACHNE, *Hack. Monogr. Androp.* 450. Cymbachne ciliaris, *Retz. Obs.* vi. 36. Rottboellia Cymbachne, *Willd. Sp. Pl.* i. 465. ? Arthrostachys gracilis, *Desv. Opusc.* 74, t. 6, f. 2.—Bengal, *Kœnig*.—An obscure plant, described by Hackel from an incomplete specimen in the Copenhagen Herbarium, and referred to the section *Arthrolepis*.

A. CYMBARIUS, *Linn. Mant.* ii. 303; *Hack. l. c.* 629. An African plant, stated by Linnæus to have been found in India by Kœnig.

A. DACTYLOIDES, *Steud. ex Duthie Grass. N. W. Ind.* 19. ? Lepeocercis digitata, *Nees*.—Doab, and banks of the Jumna, *Royle*.—*A. dactyloides*, Steud., is *Trachypogon polymorphus*, Hack., not an Indian plant, and *Lepeocercis digitata*, Nees ex Royle, is a name only, not taken up by Hackel.

A. DEPAUPERATUS, *Kunth Revis. Gram.* i. 166, *Enum. Pl.* i. 509; *Hack. l. c.* 565. Pollinia depauperata, *Spreng. Pugill.* ii. 11, *Syst. Veg.* i. 289.—Bengal.—An indeterminable species of subgen. *Chrysopogon*.

A. DIVERSIFLORUS, *Steud. in Zoll. Syst. Verz.* 58, is *Polytrias præmorsa*, Hack. (Androp. 189), a Javanese plant not hitherto found in British India.

A. FLABELLIFORMIS, *Roxb. ex Spreng. Pugill.* ii. 9, *Syst. Veg.* i. 283; *Kunth l. c.* 509; *Hack. l. c.* 651.—Bengal.—Is indeterminable.

A. FULVUS, *Spreng. Pugill.* ii. 8, *Syst. l. c.* 287; *Kunth l. c.* 503; *Hack. l. c.* 565.—Bengal.—Is undeterminable.

54. **ANTHISTIRIA,** *Linn.*

THEMEDA, *Forsk.*

Tall, annual or perennial grasses. *Leaves* long, narrow. *Spikes* many, short, crowded in spathaceous panicled fascicles, each in a proper spathe, very shortly peduncled, inarticulate at the base. *Spikelets* 6–11; 4 lowest male or neuter, involucriform, awnless, in superposed pairs or whorled round a jointed rachis which bears one or more sessile bisexual or fem. usually awned spikelets, each with one or if more than one then the uppermost with pedicelled male or neuter awnless spikelets inserted on its callus. *Bisexual (or fem.) spikelets* linear-oblong; callus long or short; gl. I terete, or dorsally compressed or channelled, coriaceous, at length hardened, margins incurved not keeled; II as long, coriaceous, 3-nerved, keeled, keel broad, margins thin incurved; III oblong, hyaline, 1-nerved; IV the very slender sometimes narrowly hyaline base of an awn, rarely awnless; palea 0. *Lodicules* cuneate. *Stamens* 3. *Styles* free, and stigmas long. *Grain* oblong. *Pedicelled spikelets* lanceolate, dorsally compressed; pedicels slender, compressed; gls. 1–3, I many-nerved, margins inflexed, keels often winged; II as long as I, 1–3-nerved, hyaline, or 0; III smaller or 0.—Species about 10; warm regions of the Old World.

The species of this genus are most difficult of discrimination, of which the best proof is the irreconcilable conclusions of two excellent botanists, both experts in the Order of *Gramineæ*, Andersson (*in Nov. Act. Upsal.* III. ii. (1856), and Hackel (*Monogr. Androp.*).

Hackel has restored Forskahl's name of *Themeda* because of its having four years of priority, and of Linnæus' description of *Anthistiria* being very inaccurate. The claim of priority is obvious, but if that of inaccurate description is admitted, it should invalidate the recognition of a host of the genera of old authors. Against both claims stands the fact, that *Anthistiria* had for upwards of a century been adopted by all botanical writers.

* Involucrant spikelets inserted on a level, all sessile; glumes 3, solitary in *A. arguens*.

1. **A. arguens,** *Willd. Sp. Pl.* iv. 901; annual, spikes in lax nodding heads, outer spathes 3–5 in. very narrow base hirsute, proper spathes ½–1 in., involucr. spikelets 2–4 ¼–⅓ in. unequal, glume solitary. *Kunth Enum. Pl.* i. 482; *Steud. Syn. Gram.* 401. A. frondosa, *Br. Prodr.* 200; *Benth. Fl. Austral.* vii. 542. A. arundinacea, *Hassk. in Tijdschr. Nat. Gesch.* x. 115 (*non Roxb.*). A. ciliata var. Junghuhniana, *Büse ex Miq. Fl. Ind. Bat.* iii. 504. A. pilifera, *Steud. in Zoll. Syst. Verz.* 58, *Syn. Pl. Gram.* 400. A. Junghuhniana, *Nees in Jung. Jav. ex Anderss. in Nov. Act. Upsal. Ser.* III. ii. 233. Aristaria barbata, *Jungh. in Tijdschr. Nat. Gesch.* vii. 296. Themeda arguens, *Hack. Monogr. Androp.* 657. Stipa arguens, *Linn. Sp. Pl. Ed.* II. 117.

MALACCA, *Griffith*. ANDAMAN ISLDS., *Prain*.—DISTRIB. Malaya, Australia.

Stems tall or short, sometimes 10 ft. high, stout or slender. *Leaves* 10–16 by ¼ in. or narrower, and sheaths glabrous or sparsely hairy; ligule rounded. *Heads* of spikes flabelliform, long-peduncled; spikes with often imperfect scattered linear hyaline spikelets on the peduncle. *Invol. spikelets* very irregular, often only 2, linear-lanceolate, hyaline, 5–6-nerved. *Bisexual spikelets* ¼–⅓ in., solitary, cylindric, with a long pungent dorsally brown-bearded callus, brown when ripe, obscurely nerved, smooth and dotted below, scabrid and hispid towards the tip. *Awn* very stout, often 3 in. long, dark brown.—The Malaccan specimens are small (1–2 ft.), and weaker than the insular.

2. **A. imberbis,** *Retz. Obs.* iii. 11; perennial, spikes in globose or fan-shaped fascicles, spathes glabrous or sparsely hairy, outer 1–2 in., proper about ½ in., invol. spikelets ⅓–½ in. glabrous or ciliate with tubercle-based hairs gls. 3, bisexual spikelets solitary ¼–⅓ in. with 2 pedicelled

scabrid towards the tip only, callus long pungent. *Kunth. Enum. Pl.* i. 481; *Steud. Syn. Gram.* 401. A. Forskahlii, *Kunth Revis. Gram.* i. 162, *Enum l. c.* 483; *Steud. l. c.* 402. A. vulgaris, *Hack. in Engl. & Prantl. Natürl. Planzenf.* ii. II. 29. Themeda triandra, *Forsk. Fl. Ægypt. Arab.* 178. T. polygama, *Gmel. Syst.* 149. T. Forskahlii, *Hack. Monogr. Androp.* 659; *Duthie Fodd. Grass. N. Ind.* 43.—Anthistiria, *Wall. Cat.* n. 8764, A. C. E. F.

Hotter drier parts of INDIA, from Upper Bengal to Travancore, ascending the Himalaya to 3–4000 ft. (Var. *Roylei* to 10,000 ft.). BURMA. CEYLON, ascending to 4000 ft.—DISTRIB. Warm regions of the Old World.

Stem 1–6 ft., stout or slender, subsimple or branched. *Leaves* 3–10 in., linear, rather rigid, glabrous or sparsely hairy, green or subglaucous beneath; ligule short, ciliolate. *Head* of fascicles of spikes few or many, long- or short-peduncled; spathes glabrous or ciliate with usually very small tubercle-based hairs; proper spathes longer than the spikes, cymbiform, tips acute or subacute. *Involucr. spikelets* $\frac{1}{3}$ in., oblong-lanceolate, acute or acuminate, red brown, dorsally hispidly ciliate or glabrous, glumes 3. *Bisexual spikelets* cylindric, obtuse, with long brown hairs; gl. I terete, dorsally rounded, ripe polished dark brown, hispidulous towards the tip only; awn $\frac{1}{2}$–2 in. long, base capillary. *Pedicelled spikelets* very narrow, glabrous or ciliate with a few tubercled-based hairs, keels ciliolate.—A very variable grass, some states of which are with difficulty distinguishable from *A. ciliata.* The earliest names of this plant are *Themeda triandra,* Forsk., and *Anthistiria imberbis,* Retz. Hackel has abandoned both, substituting first *Anthistiria vulgaris,* and then *Themeda Forskahlii,* on the ground that *A. imberbis* was perhaps not Forskahl's *T. triandra* (why then call it *Forskahlii*?) of which no type specimen exists, and because *triandra* indicates a character of no individual value in grasses. In so doing he overlooked Gmelin's * name of *T. polygama* (Syst. 149). Having regard to the wide range of *A. imberbis,* from Australia to Africa, its presence in Arabia might well be anticipated; and that it is a native of that country is now proved by Schweinfurth's finding Hackel's var. *glauca* in that country. This makes the var. (which is local, and not Indian) the type of the species, and, if Forskahl's name of *Themeda* is to be retained, necessitates a rearrangement of the varieties. To me it appears most expedient to retain Retz's name which applies to the prevalent form over the area of distribution as the specific one.

The following is Hackel's arrangement of the Indian forms which may be variously reduced or added to. It has the great merit of systematizing the authorities fairly well. Of these I have kept up var. *laxa* as a species, following Andersson, though not without doubts. Of others, as *A. polystachya,* I am doubtful, judging from Roxburgh's description and its being an annual, I suspect it may be a state of *ciliata.* Andersson included it under *A. arguens,* which it certainly is not.

* *Stem* 1–3 ft. *Leaves* 2–8 by $\frac{1}{10}$–$\frac{1}{6}$ in. *Panicle* 6–12 in., nodes 2–3, lower branches simple below. Gl. I of *invol. spikelets* not winged or narrowly on one side only.

Var. *vulgaris,* Hack. l. c. 660; spikelets with many tubercle-based hairs. A. ciliata, *Retz. l. c.* (*non Linn. f.*); *Lamk. Ill.* t. 841, f. 2; *Cav. Ic.* t. 459; *Roxb. Fl. Ind.* i. 247; *Wight. Cat.* n. 1708; *Anderss. in Nov. Act. Sc. Upsal.* ii. (1856), *in Walp. Ann.* vi. 1057; *Grah. Cat. Bomb. Pl.* 239; *Dalz. & Gibs. Bomb. Fl.* 304; *Thw. Enum. Pl. Zeyl.* 366 (*excl. var.* major); *Trim. Cat. Ceyl. Pl.* 108; *Benth. Fl. Austral.* vii. 542. ? A. polystachya, *Roxb. l. c.* 248; *Kunth Enum. Pl.* i. 481; *Steud. l. c.*

Var. *imberbis,* Hack. l. c. 661; invol. spikelets glabrous or very sparingly hairy. A. ciliata var. imberbis, *Nees in Linnæa* vii. (1832) 284. A. ciliata var.

---

* Gmelin has, by oversight probably, assumed the first word of Forskahl's brief diagnosis to be his specific name.

major, *Thw. l. c.* 366. A. ciliata? *Munro in Herb. Griff.* (*Kew distrib.* n. 6808). *A.* australis, *Br. Prodr.* 200; *Kunth l. c.*; *Steud. l. c.*; *Anderss. l. c.* 13; *Walp. l. c.* 1058. A. arguens, *Wight Cat.* n. 1709. A. imberbis, *Retz. Obs.* iii. 11; *Kunth l. c.* 481 (*excl. Syn.*).—Anthistiria, *Wall. Cat.* 8764, A. E. F.

** *Stems* 3–5 ft. *Leaves* 8–16 by $\frac{1}{5}$–$\frac{1}{3}$ in. *Panicle* 16–24 in.; nodes 5–6; lower branches usually compound. Gl. I of *invol. spikelets* with often broad scarious margins.

Var. *major,* Hack. l. c. 662; proper spathes and invol. spikelets hirsute with green or white tubercle-based hairs. A. ciliata, *Thunb. Fl. Jap.* 40; *Wight Cat.* n. 1708. ?A. puberula, *Anderss. l. c.* 12; *Walp. l. c.* 1038 (see Var. *Roylei*).

*** Annual? *Stem* very slender, unbranched; leaves very narrow.

Var. *Roylei,* Hook. f.; spikes few in peduncled axillary fascicles, spathes glabrous outermost 2–3 in. proper rather longer than the spikes, invol. spikelets $\frac{1}{3}$ in. naked or with a few cilia, bisexual $\frac{1}{4}$–$\frac{1}{3}$ in. hispid towards the tip, pedicelled longer glabrous, keels not ciliate. ?A. puberula, *Anderss. l. c.* 12; *Walp. l. c.* 1058. A. ciliata, β, *Nees in Herb. Royle.*—N. W. Himalaya, *Royle*; Simla Hills, *Thomson.* Kumaon, alt. 7500 ft., Strach. & Winterb. (*A. ciliata*).—A very distinct form, and the only temperate one of *A. imberbis.* It closely resembles *A. Hookeri,* the only other temp. Himalayan species, which has superposed pairs of much larger invol. spikelets, solitary spikes and short spathes. The glabrous spikelets and larger sessile spikelets hispid at the top distinguish it from *ciliata.*

3. **A. laxa,** *Anderss. in Nov. Act. Sc. Upsal. Ser.* III. ii. (1856) 243; perennial, stem tall stout leafy proliferously branched, panicles of spikes small of few spikelets in a long lax subsimple leafy panicle shortly peduncled, outer spathes $\frac{1}{2}$–1 in., proper spathes nearly glabrous hardly longer than the spikes, involuc. spikelets $\frac{1}{7}$–$\frac{1}{6}$ in. nearly glabrous gls. 3, bisexual spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. solitary with 2 pedicelled, callus short, pedicelled spikelets glabrous or nearly so, awn 1–$1\frac{1}{2}$ in. *Walp. Ann.* vi. 1059. Themeda Forskahlii, *var.* ? laxa, *Hack. Monogr. Androp.* 663.—Anthistiria, *Wall. Cat.* n. 8775.

NEPAL, *Wallich.* BHOTAN, *Griffith.* CENTRAL PROVINCES; Khandwa, *Duthie.*

Intermediate between *A. imberbis* and *ciliata,* with very stout erect polished stems 2–3 ft. high, as thick as a goose-quill, and very small nearly glabrous heads of spikes. The panicle is leafy and all the leaves are very narrow. There is a specimen in the Kew Herbarium from Roxburgh, but without habitat. It may prove to be a form of *A. imberbis,* with small spikelets, or of *strigosa,* with unarmed spathes and spikelets.

4. **A. ciliata,** *Linn. f. Nov. Gram. Gen.* 35; annual, spikes in globose or fan-shaped fascicles, outer spathes 1–3 in. glabrous or sparingly ciliate, proper spathes and spikelets usually copiously clothed with tubercle-based bristles, invol. spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. gls. 3, bisexual spikelets $\frac{1}{8}$–$\frac{1}{5}$ in. usually solitary with 1 or 2 pedicelled spikelets scabrid, callus short obtuse, awn 1–$1\frac{1}{2}$ in. *Gærtn. Carp.* ii. 465, t. 175; *Lamk. Illustr.* t. 841, f. 1; *Beauv. Agrost.* t. 23, f. 7; *Steud. Syn. Gram.* 401; *Duthie Grass. N.W. Ind.* 42; *Baker Fl. Maurit.* 448. A. barbata, *Desf. in Journ. Phys.* xl. 294, t. 2. A. scandens, *Roxb. Fl. Ind.* i. 248. A. semiberbis, *Nees Fl. Afr. Austr.* 125. Themeda ciliata, *Hack. Monogr. Androp.* 664. Andropogon nutans, *Linn. Mant.* ii. 303. A. quadrivalva (*err. typog.*) *Linn. Syst. Veg. Ed.* xiii. 758.—Anthistiria, *Wall. Cat.* n. 8764 B. D.

N.W. INDIA, *Royle,* Kumaon, ascending to 7500 ft., Nepal, *Wallich.* BENGAL, *Roxburgh.* BEHAR, *J. D. H.* The CONCAN, CENTRAL PROVINCES, MALABAR and TENASSERIM.—DISTRIB. Mascarene Islds.

In habit and size *A. ciliata* often resembles the ordinary states of *A. imberbis* and it varies quite as much as that species does. The diagnoses given above serve to distinguish them, especially the small size of the spikelets of *A. ciliata*, its annual habit and the large size of the tubercles on which the far more copious rigid bristles are inserted. Roxburgh describes it as perennial and scandent, with stems many feet long, rooting at the nodes, but Hackel has pointed out that Roxburgh's description is that of an annual; and as I have seen it growing in Bengal, it is rather a scrambler amongst bushes than scandent in a strict sense. The stems are also often erect with a geniculate base.

Var. *Helferi*; dwarf, spikes in more compact globose heads. A. Helferi, *Munro mss.* Themeda Helferi, *Hack. l. c.* 665.—Tenasserim, *Helfer*.—I think this is only a dwarf variety of *A. ciliata*, specimens of which accompany it in Helfer's herbarium.

5. **A. strigosa,** *Ham. mss.*; perennial, stem tall rather stout, spikes in small dense shortly peduncled heads arranged in a long very narrow panicle with filiform leaves, spathes very short glabrous, invol. spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. gls. 3 dorsally clothed with very rigid tubercle-based bristles, bisexual spikelets 1–2 $\frac{1}{7}$–$\frac{1}{6}$ in. hispidulous towards the tip, callus short obtuse, awn very short capillary.—Anthistiria, *Wall. Cat.* n. 8766.

LOWER ASSAM, *Hamilton*. BEHAR; Monghyr, *Herb. Calcutt.*

Stem 3–4 ft., erect, as thick as a small goose-quill, polished. *Leaves* 1 ft. by $\frac{1}{8}$–$\frac{1}{6}$ in., smooth, tips filiferous; sheaths polished, terete, keeled; ligule a narrow ciliolate membrane. *Panicle* 1–2 ft., with one or two lower long axillary branches; leaves of panicle 6–10 in., flexuous; fascicles of spikes triangular, about $\frac{1}{3}$ in. broad, outer spathes hardly longer than the fascicles cymbiform with very slender tips, glabrous. *Invol. spikelets* gl. I margins narrowly winged; II as long, acuminate, 3-nerved; III lanceolate, hyaline, 1-nerved. *Bisexual spikelets* terete; callus bearded with white hairs; gl. II coriaceous, notched, awned; III shorter, hyaline, 1-nerved; IV the very narrow bifid hyaline margin of an excessively slender awn $\frac{1}{4}$ in. long; palea minute. Gl. I of *pedicelled spikelets* lanceolate, keels with long stiff tubercle-based hairs.—The long panicle and very small heads with short spathes, and the strongly armed gls. of the invol. and pedicelled spikelets distinguish this from *A. imberbis*, and ally it to *ciliaris* with which it agrees in the size and armature of the spikelets.

** Involucrant spikelets in superposed pairs, glumes 3 or 4.

† *Callus of bisexual spikelets short, obtuse.*

6. **A. tremula,** *Nees ex Steud. Syn. Gram.* 401; tall, slender, panicle sparingly branched, spikes in subflabelliform fascicles $\frac{1}{2}$–1 in. broad, outer spathes $\frac{1}{2}$–1 in., invol. spikelets softly hairy, bisexual spikelets 1 or 2 hispidulous deeply dorsally channelled, awn $\frac{1}{2}$–$\frac{3}{4}$ in. *Thw. Enum. Pl. Zeyl.* 366; *Trim. Cat. Ceyl. Pl.* 108. A. arguens, *Heyne ex Wall. Cat.* n. 8765. Androscepia tremula, *Anderss. in Nov. Act. Upsal. Ser.* III. ii. (1856) 247. Themeda tremula, *Hack. Monogr. Androp.* 667.—Anthistiria, *Wall. Cat. l. c.*

The DECCAN PENINSULA; from the Concan and Central Provinces southwd. CEYLON, *Walker*, *Thwaites* (C.P. 961 *in part*).

Perennial? *Stem* tufted, 1–3 ft., rarely thicker than a crow-quill. *Leaves* 6–12 in., finely acuminate, nearly smooth, margins scaberulous, upper often exceeding the panicle; ligule a narrow membrane. *Panicle* 1–2 ft., subsimple, of many usually distant compound fascicles of spathes and spikes on flexuous capillary peduncles $\frac{1}{2}$–1 in. long; lower branches sometimes elongate and again panicled; fascicles red brown when dry, the larger sometimes semiglobose; outer spathes usually hardly longer than the fascicles, proper spathes not twice as long as the spikes, sides and keel ciliate.

Invol. spikelets ¼ in.; gls. 3, ovate-lanceolate, acuminate, margins with narrow scarious wings, dorsally copiously ciliate with tubercle-based hairs; II as long, lanceolate, acuminate, membranous, 3-nerved; III as long, hyaline, lanceolate, acuminate, 2-nerved. *Bisexual spikelets* ⅙ in., usually 2, lower with one pedicelled spikelet, upper with two; callus hairs rusty. *Pedicelled spikelets* lanceolate, gls. 3; I lanceolate, dorsally ciliate with long hairs and one margin winged; II and III as in the involucrant spikelets.

7. **A. Thwaitesii,** *Hook. f.*; tall, very stout, nodes glaucous, panicle leafy, spikes in dense subflabelliform fascicles 1–1½ in. broad, outer spathes 1–2½ in., bisexual spikelets 2 hispidulous dorsally channelled, awn 1 in.

CEYLON, *Thwaites* (C.P. 961 *in part*).

Perennial? *Stem* probably 5–6 ft., thicker than a goose-quill, polished. *Leaves* 1–2 ft. by ¼–⅔ in., finely acuminate, tips setaceous; ligule a ciliolate narrow membrane. *Panicle* 12 in. or more; rachis stout, leafy; leaves 6–10 in. long. *Fascicles* of spikes as in *A. tremula,* but larger and less hairy.

8. **A. Cymbaria,** *Roxb. Fl. Ind.* i. 251 (*excl. Syn.*); tall, stout, panicle supradecompound thyrsiform, spikes innumerable glabrous densely crowded in small long peduncled narrow fascicles ¼–½ in. long, proper spathes ½–⅔ in. linear-lanceolate, invol. spikelets ⅛–⅙ in. acuminate glabrous gls. 4, bisexual spikelets solitary (rarely 2) awned, callus hairs white soft = ½ the spikelet. *Kunth Enum. Pl.* i. 482, *excl. Syn., Suppl.* 396; *Steud. Syn. Gram.* 399; *Grah. Cat. Bomb. Pl.* 219; *Dalz. & Gibs. Bomb. Fl.* 304; *Thw. Enum. Pl. Zeyl.* 436; *Trim. Cat. Ceyl. Pl.* 108. Andropogon serratifolius, *Herb. Heyne ex Wall. Cat.* n. 8771 B. Themeda Cymbaria, *Hack. Monogr. Androp.* 668.—Anthistiria, *Wall. Cat.* n. 8771.

NILGHIRI HILLS, *Wight, Schmid.* MYSORE or the CARNATIC, *Herb. G. Thomson.* CEYLON; Matelle East, *Thwaites* (C.P. 3257, 3803).

Perennial. *Stem* 3–8 ft., as thick as a swan's quill below, puberulous beneath the nodes. *Leaves* 2–4 ft. by ⅙–¼ in., not overtopping the panicle, scaberulous above, glaucous beneath, margins scabrid; sheaths subcompressed, keeled; ligule very short. *Panicle* tall, 1–2 ft., branches smooth or scaberulous; spikes in oblong fascicles ½–⅓ in. long. *Invol. spikelets,* red or blueish, keels scabrid. *Bisexual spikelets* linear-oblong; gl. I shining below, scaberulous above; awn ¼–¾ in., slender.

9. **A. anathera,** *Nees ex Royle Ill. Bot. Himal.* 417 (*name*); upper leaves erect exceeding the elongate subsimple panicle, spikes few in pedicelled fascicles, involucr. spikelets ⅕–⅓ in., glumes 4, keels of gl. I with tubercle-based hairs, bisexual spikelets 2–3 linear-lanceolate not awned, keels of gl. I ciliolate. *Steud. Syn. Gram.* 402; *Aitch. Cat. Panjab Pl.* 173; *Duthie Grass. N.W. Ind.* 23, *Fodd. Grass. N. Ind.* 42; *Boiss. Fl. Orient.* v. 460. Androscepia anathera, *Anderss. in Nov. Act. Sc. Upsal. Ser.* III. ii. (1856) 249. Themeda anathera, *Hack. Monogr. Androp.* 669.—Anthistiria, *Wall. Cat.* n. 8773.

WESTERN HIMALAYA; from Kashmir to Kumaon, alt. 4500–7000 ft., and to 9000 ft. in Garwhal, *Duthie.*—DISTRIB. Affghanistan.

Perennial. *Stem* erect, 1–4 ft., slender, leafy. *Leaves* very narrow, ⅓–⅛ in. broad, rigid, glaucous, margins and upper surface scabrous, scaberulous beneath; sheaths glabrous; ligule oblong, obtuse. *Panicle* 1–2 ft., narrow, glabrous; proper spathes ½–1 in., linear-lanceolate, acute. *Spikes* glabrous. *Involucr. spikelets* more or less hispid, one of each pair shortly stipitate.—Wallich's habitat for his n. 8773, "Bengal, near the Calcutta Bot. Garden," is either an error or the plant was an escape from cultivation. Andersson has two varieties, α. *hirsuta,* invol. spikelets wholly and pedicelled partially covered with tubercle-based hairs, and β. *glabrescens*, more glaucous, leaves pruinose, invol. spikelets dorsally glabrous or scabrous above, pedicelled glabrous.

§§ *Callus of bisexual spikelets acute.*

10. **A. Hookeri,** *Griseb. in Goetting. Nachr.* (1868) 91; stem slender simple or sparingly branched above, spikes (with their proper sheath) axillary solitary long-peduncled glabrous, invol. spikelets $\frac{1}{3}$–$\frac{2}{3}$ in. sessile linear-lanceolate acuminate gls. 3, bisexual spikelets 1 or 2 scabrid above the middle dorsally rounded, awn $\frac{3}{4}$–1 in. A. gigantea *subsp.* caudata, *in part, Hack. Monogr. Androp.* 676. Androscepia glabrata, *Anderss. in Herb. Kew.*

SIKKIM HIMALAYA; interior ranges, alt. 6500–9000 ft., *J. D. H.*, *Gammie.*

Stem 1–2 ft., shortly creeping at the base, erect or geniculately ascending, as thick as a crow-quill or less. *Leaves* very narrow, rarely $\frac{1}{6}$ in. broad, quite smooth, subglaucous beneath, tips filiform; sheath smooth; ligule short ciliolate. *Spikes* axils in the long erect very slender leaves, rarely geminate in one short outer spathe, $\frac{2}{3}$ in. long, laterally compressed (without an outer spathe exceeding the proper), peduncle 1–2 in., filiform, enclosed sometimes up to the spike in a very slender spathe with a subulate tip; proper spathe linear-lanceolate, acuminate. *Rachis* of spike usually exceeding the invol. spikelets and proper spathe, nearly glabrous. *Invol. spikelets* quite glabrous, keels smooth, very narrowly winged. *Bisexual spikelets* like those of *A. imberbis* in form and colour of gl. I, and in the conic acute callus densely villous with rusty-red hairs; gl. II scabrid towards the tip; awn geniculate, narrowed below to a capillary base; lodicules membranous. *Pedicelled spikelets* much longer than the bisexual, narrowly lanceolate, acuminate, glabrous, keels hardly scaberulous; pedicels slender, glabrous except at the base.—Though nearest allied to *A. gigantea*, which is a thoroughly tropical grass, this species most resembles *A. imberbis*, and especially its var. *Roylei*, from which it is at once distinguished by wanting the long outer spathe, and by the superposed invol. spikelets.

11. **A. gigantea,** *Cav. Ic.* t. 36; tall, usually stout, spikes few in narrow pedicelled fascicles terminating the branches of a compound or decompound inclined or nodding rarely subsimple panicle, proper spathes rather longer than the spikes, involucr. spikelets linear-lanceolate, one of each pair deciduous, bisexual spikelets 1–3 rufously hirsute dorsally channelled. Themeda gigantea, *Hack. Monogr. Androp.* 672.

LOWER HIMALAYA; from Kumaon eastwards, to ASSAM, BEHAR and the KHASIA HILLS, ascending to 4000 ft.—DISTRIB. China, Malaya, Australia, N. Caledon.

Stem 8–16 ft., often nearly 1 in. diam. below, erect, solid, terete, glabrous, simple below, branching above, leafy. *Leaves* 4–8 ft. by $\frac{1}{2}$–1 in., linear, setaceously acuminate, scaberulous above, glaucous beneath, margins scabridly serrulate, base narrowed, midrib broad, lower bifarious; lower sheaths compressed; ligule short, membranous, ciliolate. *Panicle* 1–3 ft., oblong, rarely simple, inclined, branchlets flexuous; spikes often pendulous; spathes narrowly cymbiform, keel and nerves scabrid. *Spikes* as long as the proper spathes or shorter; peduncle much shorter than the spathe, filiform, erect or divaricate. *Invol. spikelets* $\frac{1}{3}$–$\frac{2}{3}$ in.; gl. I linear-lanceolate, setaceously acuminate, glabrous or hirsute with fulvous hairs, keels scabrid; II shorter, acuminate, ciliate; III and IV still shorter, linear-oblong or lanceolate, ciliate. *Bisexual spikelets* $\frac{1}{5}$–$\frac{1}{3}$ in., linear-lanceolate; callus $\frac{1}{8}$–$\frac{1}{6}$ in. villous with long brown hairs; gl. I coriaceous, acute or acuminate, dorsally 1–3-channelled, more or less villously hirsute all over or below the middle with brown hairs; II acute in the awnless spikelets, obtuse in the awned; III oblong-lanceolate, 1-nerved; IV = III, linear-lanceolate in the awnless spikelets, acute, 1-nerved in the awned; IV the hyaline base of the awn.—Hackel classifies the form of this protean plant under 6 subspecies and 12 varieties. Of these the Indian (exclusive of intermediates) may be grouped as follows. They do not affect definite areas, and some of them may be different states of one variety.

Subsp. *genuina*, Hack. l. c. 672; panicle decompound, branches branchlets and peduncle of spike villous with rusty hairs, proper sheaths 1–1½ in., spikelets ⅓–⅔ in. or more dorsally hirsute with rusty-brown hairs, bisexual spikelets 1–3 in each raceme ⅓ in. awned or not. A. gigantea, *Cav. l. c.* A. vulpina, *Anderss. in Nov. Act. Sc. Upsal.* III. ii. (1856) 245. Androscepia gigantea, var. *a*, *Brongn. in Voy. Coq. Bot.* 78; *Kunth Enum. Pl.* i. 484 (*excl. Syn.*). Calaminea gigantea, *Roem. & Sch. Syst.* ii. 810 (*non Beauv.*). Perobachne secunda, *Presl. Rel. Hænk.* i. 348, t. 48; *Kunth l. c.* 485.

Subsp. *arundinacea* (including subsp. *intermedia*), Hack. l. c. 674; panicle compound dense or lax, branches and branchlets glabrous, proper spathes 1½–2 in. ciliate, invol. spikelets ⅓–⅔ in. dorsally hirsute with golden or rusty hairs, bisexual spikelets 1 rarely 2 in each spike about ½ in long, awn 1½–4 in. A. arundinacea, *Roxb. Fl. Ind.* i. 251; *Kunth Revis. Gram.* i. 363, t. 95, *Enum.* 482, *Suppl.* 394; *Steud. Syn. Gram.* 401; *Duthie Grass. N.W. Ind.* 23, *Fodd. Grass. N. Ind.* 42. A. subsericans, *Nees ex Steud. l. c.* Cymbopogon arundinaceum, *Schult. Mant.* ii. 457.—Anthistiria, *Wall. Cat.* n. 8763, 8772, 8774 B.—Subsp. *intermedia*, differs from *arundinacea* in the less hirsute male spikelet and in the awn reduced to a bristle.

Subsp. *villosa*, Hack. l. c.; panicle large decompound, branches and branchlets glabrous or scaberulous, proper spathes 1–1½ in., spikes erect or divaricate, invol. spikelets ⅓–½ in. glabrous smooth or scaberulous, bisexual spikelets ¼–⅓ in., awn $\frac{1}{20}$–⅓ in. or 0. A. villosa, *Poir. Encycl. Suppl.* i. 396; *Lamk. Ill.* t. 841, f. 3; *Steud. l. c.* A. mutica, *Steud. l. c.* Androscepia gigantea & mutica, *Anderss. l. c.* 248 (*excl. Syn.*), t. 3 (gigantea). Andr. gigantea, *var.* sundaica, *Buese Pl. Jungh.* i. 364. Aristaria mutica, *Hassk. in Tijdschr. Nat. Gesch.* x. 117, *in Ann. Sc. Nat. Ser.* 3, iv. 178. Heterolytron scabrum, *Jungh. l. c.*—Anthistiria, *Wall. Cat.* n. 8776.—Assam, Khasia Hills, Malacca, Java.

Subsp. *caudata & longispatha*, Hack. l. c. 676, 677; panicle lax-fld. subsimple or decompound, branches and branchlets glabrous, proper spathes 1–1½ in., spikes often divergent, invol. spikelets ⅓–½ in., keels scabrid glabrous, bisexual spikelets 2–3 in each spike, awn ½ in. A. caudata, *Nees in Hook. & Arn. Bot. Beech. Voy.* 245; *Steud. l. c.* 402. Androscepia gigantea, *var.* himalayensis, *Rupv. ex Anderss. l. c.* 248. Andr. gigantea, *v.* armata, *Anderss. l. c.*—Anthistiria, *Wall. Cat.* n. 8774 A.

Var. *longispatha*, Hack. l. c. 677; leaves glaucous beneath smooth except the scabrid margins, stems and sheaths quite glabrous, panicle broad compressed, branches scaberulous, pedicelled spikelets nearly smooth except the scabrid keels, involucr. spikelets about ¾ in.—Terai of the Himalaya, *Kuntze.*—I have seen no authentic specimen.

DOUBTFUL SPECIES.

Anthistiria sp.? an imperfect specimen from Chota Nagpur, *Dr. Wood* (*Herb. Calcutt.*) with the invol. gls. of *A. gigantea*, var. *villosa*, but with very broad leaves deeply cordate and amplexicaul at the base.

55. **ISEILEMA,** *Hack.*

Differs from *Anthistiria* in each spike being jointed below the involucral spikelets on the top of its peduncle, and falling away from it as a whole after flowering; whereas in *Anthistiria* the involucrant spikelets are persistent and the rest of the spike deciduous. In the former case, as Hackel observes, the dispersal of the species is by the wind, in the latter by the callus of the bisexual spikelets piercing the skin or becoming otherwise attached to animals.—Species 5, tropical Asiatic and Australian.

* *Keel and submarginal nerves of the spathes granulate or tubercled.*

1. **I. Wightii,** *Anderss. in Nov. Act. Soc. Sc. Upsal. Ser.* 3, ii. 251; panicle decompound rather dense, spathes linear-lanceolate shorter or rather longer than the peduncle, invol. spikelets $\frac{1}{8}$ in. almost concealing the bisexual. *Hack. Monogr. Androp.* 679; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vi. (1891) 218. Anthistiria prostrata, *Willd. Sp. Pl.* iv. 901; *Roxb. Fl. Ind.* i. 250. A. cimicina, *Edgew. in Journ. As. Soc. Beng.* (1852) 182 (*in Bot. Zeit.* (1852) 860); *Steud. Syn. Gram.* 400; *Duthie Grass. N. W. Ind.* 24. A. Wightii, *Nees ex Steud. l. c.*; *Duthie l. c.* A. Linnæana, *Steud. l. c.* Andropogon prostratus, *Linn. Mant.* ii. 304. Cymbopogon glandulosus, *Spreng. Pugill.* ii. 14.—Anthistiria, *Wall. Cat.* n. 8770.

Throughout INDIA; from the Panjab eastwards to Burma, and southwards to Malabar and Mysore.

Perennial; stem 6 to 3 ft., erect or base decumbent, rarely as stout at the base as a goose-quill, usually slender; nodes often bearded. *Leaves* 4–8 in., narrow, smooth or scaberulous, floral scabrid with tubercled margins, upper glabrous or hairy; ligule membranous, truncate. *Panicle* long or short, more or less compound; branches crowded or distant, strict or geniculate; nodes bearded; lower spathes foliaceous, floral $\frac{1}{4}$–$\frac{1}{3}$ in., keels and margins tubercled. *Involucr. spikelets* male or neuter, pedicelled, oblong-lanceolate; gl. I 5-ribbed, scaberulous. *Bisexual spikelets*, gl. I bicuspidate; II 3-nerved; IV a slender awn three times as long as the spikelet or longer.—Very variable in stature, length of leaves and habit of the panicle.

2. **I. argutum,** *Anderss. l. c.* 252; panicle linear elongate very lax, spathes elliptic-lanceolate about three times as long as the peduncle of the spike, invol. spikelets $\frac{1}{4}$ in. shorter than the bisexual. *Hack. Monogr. Androp.* 681. Anthistiria arguta, *Nees ex Steud. Syn. Gram.* 401.—Anthistiria, *Wall. Cat.* n. 8769.

BURMA; at Prome, *Wallich.*

Stem 2–3 ft., very slender, leafy at the base, compressed below. *Leaves* 3–6 in., narrowly linear, coriaceous, smooth except towards the spinulose rounded tips, deeply striate, midrib broad, floral with spinulose margins and ciliate base; sheath compressed; ligule a very short membrane. *Panicle* almost filiform, flexuous, with distant almost capillary branches; nodes ciliate; spathes $\frac{1}{2}$–$\frac{3}{4}$ in., keels and nerves granulate or tubercled. *Invol. spikelets* shortly stoutly pedicelled, linear-lanceolate; glumes 2, I 5-ribbed scaberulous, keels ciliate, tubercled; II 3-nerved. *Bisexual spikelets* linear-lanceolate; gl. I long-beaked, beak scabrid; IV a slender awn.—The materials are scanty; more specimens may modify the above characters.

** *Keel and submarginal nerves of spathe not granulate or tubercled.*

3. **I. laxum,** *Hack. Monogr. Androp.* 682; panicle slender, spikes erect, invol. spikelets with short filiform pedicels covering the fem. glumes 3 glabrous, bisexual spikelet narrowly lanceolate pedicelled glabrous. *Duthie Fodd. Grass. N. Ind.* 43; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vi. (1891) 218. T. prostratum, *Anderss. in Nov. Act. Soc. Sc. Upsal. Ser.* 3, ii. 251 (*excl. Syn.*), t. 111. Anthistiria prostrata, *Willd.*, β. glaucescens, *Nees in Wight Cat.* n. 1711 b. Andropogon parviflorus, *Herb. Wight ex Wall. Cat.* 8767 C. A. prostratum, *Herb. Russ. ex Wall. Cat. l. c.* D.—Anthistiria, *Wall. Cat.* n. 8767 A (*in small part*), B. C. D.

UPPER GANGETIC PLAIN; Patna, *Wallich.* The DECCAN PENINSULA, from the Concan southward, *Wight*, &c.

Stems tufted, 8–36 in., erect or ascending. *Leaves* narrow, 3–10 in., linear, obtuse, base ciliate; sheaths lax; ligule membranous, truncate. *Panicle* flexuous, narrow; branches short, distant; spathes ¼ in., elliptic-lanceolate, reddish, keel and nerves scabrid. *Invol. spikelets* ⅙ in.; pedicels glabrous; gl. I oblong-lanceolate subacute, 5-nerved; II 3-nerved; III linear. *Bisexual spikelets*; pedicel ciliate; gl. I chartaceous, lanceolate, acuminate, tip truncate; II acuminate, 1-nerved; IV awn ½–⅔ in., very slender.

4. **I. anthephoroides,** *Hack. Monogr. Androp.* 683; panicle crowded leafy, racemes divergent, invol. spikelets very shortly broadly pedicelled glumes 2, I with 5 strong villous ribs, bisexual spikelet subsessile. Anthistiria prostrata, *var.* spic. masc. longe ciliatis, *Wight Cat.* n. 2335. Anthistiria, *Wall. Cat.* n. 8767 A.

The SOUTHERN DECCAN PENINSULA, *Wight*, &c.

Nearly allied to *T. laxum*, but a shorter stouter plant, with more crowded branches of the panicle and racemes.

55^{1}. PSEUDANTHISTIRIA, *Hook. f.*

Not in Clavis, p. 5.

Annual grasses, with the habits and characters of *Anthistiria*, but wanting the involucrant spikelets of that genus.—DISTRIB. India.

Pseudanthistiria was regarded by Hackel as an anomalous section of his subgenus *Hypogynium* of *Andropogon*, with the habit of *Anthistiria*. As I have pointed out above (p. 168) it is a remarkably distinct genus of *Andropogoneæ* with characters totally at variance with those of *Hypogynium* as given in the "Monogr. Androp." I think that it is one of a natural group with *Anthistiria*, *Iseilema*, *Heteropogon* and *Germainia*. I am doubtful as to the specific value of some of the following, more copious material of all collected by good observers is wanting in this, as in so many other genera of grasses.

1. **P. heteroclita,** *Hook. f.*; leaves 6–12 in. linear glabrous or more or less ciliate nerves distinct, fascicles of spikes about ½ in. broad, proper spathes ¼ in. hardly longer than the spikes, sessile spikelets ⅛–⅙ in. hispidulous all over, awn ⅔ in. base lanceolate. Andropogon heteroclitus, *Nees Fl. Afr. Austr.* 115; *Steud. Syn. Gram.* 389; *Hack. Monogr. Androp.* 400. A. monomeros, *Hochst. in Hohen. Pl. Ind. Or.* n. 183. Anthistiria heteroclita, *Roxb. Fl. Ind.* i. 249; *Kunth Enum. Pl.* i. 483.

BENGAL; pastures near Calcutta, *Roxburgh.* The CONCAN and CANARA, *Law, Thomson*, &c.

Stem 1–2 ft., geniculate, slender, rarely as thick as a crow-quill, smooth, subsimple or branched. *Leaves* ⅙–¼ in. broad, ciliate on both surfaces together with the sheaths and margins with long tubercled-based hairs in Calcutta specimens, nearly glabrous in Western ones; sheaths much shorter than the internodes; ligule short, membranous. *Panicle* not large, leafy, compound, with many shortly peduncled fascicles; proper spathes and pedicelled spikelets with a few long tubercle-based bristles; keel ciliate; base of awn linear-lanceolate.—I have seen no Bengal specimens, but the excellent figure in Roxburgh's "Icones pictæ" leaves no doubt in my mind as to its being of the same species as the western plant, only more copiously ciliate. A specimen in Herb. Kew from Hackel was communicated as *Anthistiria tremula*, the likeness between these two plants being so deceptive.

2. **P. hispida,** *Hook. f.*; leaves 6–10 in. linear and sheaths ciliate with long hairs or glabrescent, nerves distinct, fascicles of spikes ¾ in. broad copiously hirsute with tubercle-based bristles, outer spathes 1½–2 in. long,

proper spathes much longer than the spikes, sessile spikelets ⅙ in., gl. I terete glabrous except as to the scabrid summit, awn 1–1¼ in.

The Concan, *Stocks, Law, Dalzell,* &c. CENTRAL PROVINCES; Khandwa, *Duthie* (No. 8478).

Stem 1–2 ft., rather stout, erect. *Leaves* ¼–⅓ in. broad, base narrowed, scaberulous above and on the margins. *Panicle* elongate, simple, leafy.—Closely allied to *P. heteroclita,* and perhaps only a variety of it, but a stouter more hispid plant of a pale green colour, with much longer fascicles of spikelets with longer spathes and glabrous sessile spikelets.

3. **P. umbellata,** *Hook. f.*; stem filiform straggling, leaves 1–2 in. glabrous linear-oblong acute base rounded sessile or petiolulate, nerves very slender, fascicles of spikelets few axillary ¼–½ in. broad with few sparingly ciliate spathes and spikes, outer spathes ½–1 in., proper spathes rather longer than the spikes, sessile spikelets $\frac{1}{10}$–⅛ in. scaberulous, pedicelled naked, awn ½–⅔ in. Andropogon umbellatus, *Hack. Monogr. Androp.* 401. Anthistiria heteroclita, β foliis glabris, *Wight Cat.* n. 1706.

DECCAN PENINSULA, *Wight*; Cochin, *Johnstone.* CEYLON, *Gardner,* &c.

A very slender glabrous plant, with prostrate creeping branched stems rooting at the nodes. *Leaves* distant, with a few scattered cilia on both surfaces, nearly smooth; sheaths shorter than the blade. *Fascicles* of spikelets axillary, glabrous or with a few tubercle-based cilia, on simple rarely branched capillary peduncles shorter than the leaves; lower peduncles sometimes elongate 1–3 in. long and bearing several fascicles; outer spathes ⅓–⅔ in. long. *Spikes* 3–6 in a fascicle, proper spathe glabrous. Gl. I of *sessile spikelet* dorsally concave; base of awn as in *P. heteroclita.*

4. **P. burmanica,** *Hook. f.*; stem filiform straggling, leaves 1–2 in., linear-oblong or lanceolate glabrous, nerves very slender, fascicles of spikelets few axillary very narrow with few sparsely ciliate spathes and spikes, outer spathes 1–1½ in., proper spathes longer than the spikes, sessile spikelets $\frac{1}{10}$–⅛ in. scaberulous, pedicelled naked, awn 1–1½ in. base subulate-hastate.

PEGU, *Kurz.*

Habit of *P. umbellata* (of which it is possibly a variety) but leaves narrower, fascicles of spikelets 1–1½ in. long, very narrow, with much longer awns, the base of which is suddenly dilated and hastate or sagittate at the dilatation.

Tribe V. PHALARIDEÆ. (See p. 5.)

56. PHALARIS, *Linn.*

Annual or perennial grasses. *Leaves* flat. *Spikelets* 1-fld., in contracted or spiciform panicles, laterally compressed, rachilla with 1 or 2 minute scales (imperfect gls.) below gl. III, beyond which it is not produced, jointed at the base. *Glumes* (perfect) 3, I and II subequal, empty, persistent, keels winged or not; III much smaller, bisexual, 3–5-nerved, thin, at length coriaceous; palea like the gl. 2-nerved. *Lodicules* 2. *Stamens* 3. *Styles* 2, free. *Grain* ovate or oblong, free within the gl.—Species 9 or 10 temperate and tropical.

The uppermost glume alone being flowering should technically refer this genus to the Series of *Panicaceæ*; but its affinities are with *Poaceæ*. *P. canariensis,* Linn. (Canary Grass) is given as a N.W. India Grass by Duthie and others, but I have seen no specimens; it closely resembles *P. minor,* differing in the quite entire wings of the gls. *P. paradoxa,* Linn. fil., is stated by Duthie Grass. N.W. Ind. to be Indian on the authority of Wallich (Nepal), and Stewart (The Panjab); but in Fodd. Grass. N. Ind. he says that he has not seen specimens; nor have I. It is a Mediterranean plant.

* PHALARIS proper. *Spikelets* in a dense cylindric or ovoid spiciform panicle; gls. I and II with winged keels.

1. **P. minor,** *Retz. Obs.* iii. 8; *Kunth Enum. Pl.* i. 32; *Trin. Diss.* ii. 254, *Sp. Gram. Ic.* t. 79; *Steud. Syn. Gram.* ii.; *Wight Cat.* n. 1738; *Duthie Grass. N.W. Ind.* 25, *Fodd. Grass. N. Ind.* 45; *Aitchis. Cat. Panjab Pl.* 158; *Ledeb. Fl. Ross.* iv. 455; *Boiss. Fl. Orient.* v. 472. P. ambigua, *Fig. & Notar. in Mem. Acad. Turin. Ser.* II. xii. (1852) 326, t. 10, f. 6. P. aquatica, *Ait. Hort. Kew.* i. 56. P. bulbosa, *Desf. Fl. Atlant.* i. 35 (*non Linn.*). P. canariensis, *Wall. Cat.* n. 3782 (*non Linn.*). P. capensis, *Thunb. Prodr. Fl. Cap.* 19. P. nepalensis, *Trin. Sp. Gram. Ic.* t. 80; *Kunth l. c.* 33; *Steud. l. c.* 10; *Duthie l. c.* Alopecurus otiporensis, *Griff. Notul.* iii. 94, *Ic. Pl. Asiat.* t. 143, f. 1.

Plains of WESTERN INDIA, and the HIMALAYA from Kashmir to Nepal, ascending to 5000 ft.—DISTRIB. Westwd. to the Canaries, S. Africa, Austral.

Annual. *Stem* 1–3 ft., stout or slender, leafy. *Leaves* long, linear, acuminate; sheath smooth; ligule oblong, scarious. *Panicle* small and ovoid, or longer and cylindric, 2⅓–3½ in. long by ¾ in. diam., green. *Spikelets* ⅕ in. broad, very shortly pedicelled, shining; gls. I and II acuminate, wings irregularly crenate or serrulate; III ovate, acute, silky, with one bristle-like imperfect gl. at its base.

** DIAGRAPHIS, *Trin.* (Gen.). *Spikelets* in a thyrsiform panicle; gls. I. and II. not winged.

2. **P. arundinacea,** *Linn. Sp. Pl.* 55; *Fl. Dan.* t. 259; *Host Gram. Austr.* ii. t. 33; *Engl. Bot.* t. 2160; *Kunth Enum. Pl.* i. 33, *Suppl.* 23; *Steud. Syn. Gram.* 11; *Boiss. Fl. Orient.* v. 474. P. americana, *Ell. Sketch.* i. 101. P. colorata, *Beauv. Agrost.* 172. P. intermedia, *Bosc ex Poir. Encycl. Suppl.* i. 300. P. picta, *Hort. ex Steud. Nom. Ed.* I. 609. Digraphis arundinacea, *Trin. Fund. Agrost.* 127; *Ledeb. Fl. Ross.* iv. 454. D. americana, *Loud. Hort. Brit.* 27. Baldingera arundinacea, *Dumort. Obs. Gram. Belg.* 130. B. colorata, *Gærtn. Mey. & Scherb. Fl. Wett.* i. 96. Calamagrostis colorata, *DC. Fl. Franc.* iii. 26. Arundo colorata, *Ait. Hort. Kew.* i. 116; *Engl. Bot.* t. 402; *Knapp. Gram. Brit.* i. 98.

KASHMIR; Wolar Lake, alt. 5550 ft., *Falconer*, &c.—DISTRIB. N. temp. and Arctic regions.

Perennials. *Rootstock* creeping. *Stems* 2–6 ft., stout, erect. *Leaves* long, ⅓–½ in. broad, finely acuminate; sheaths smooth; ligule large. *Panicle* 4–8 in., suberect; branches 1–2 in., spreading in flower. *Spikelets* ⅙ in., densely crowded on the scabrid branchlets, very shortly pedicelled; gl. I and II glabrous, lanceolate, acuminate; I nerveless; II 3-nerved; III ovate-lanceolate, sparsely hairy, with 2 minute linear gls. on the rachilla. *Lodicules* silky.

DOUBTFUL SPECIES.

P. PECTINATA, *Roth. Nov. Sp.* 34; *Kunth Enum. Pl.* i. 34; panicle cylindric spiciform, gl. I and II navicular margins membranous ciliate-pectinate, outer corolla 2-valved villous.

57. **ANTHOXANTHUM,** *Linn.*

Annual or perennial sweet-scented grasses. *Spikelets* 2-fid, narrow; in a spiciform panicle, persistent on the short pedicels. *Glumes* 5, I and II herbaceous, empty, persistent, acute or mucronate; I small, 1-nerved; II longest, 3-nerved, III and IV very short, keeled, hairy, 2-fid, with a dorsal bent awn; V flg., minute, hyaline, broad, obtuse, glabrous, awnless, 5–7-nerved; palea narrow, 1-nerved. *Lodicules* 0. *Anthers* 2, large. *Ovary* glabrous; styles long. *Grain* terete, acute, free within the shining gl. and palea.—Species 4 or 5, native of temperate regions.

A. ODORATUM, *Linn. Sp. Pl.* 28; *Kunth Enum. Pl.* i. 38, *Suppl.* 28, t. 8; *Host Gram. Austr.* t. 5; *Fl. Dan.* 666; *Reichb. Ic. Fl. Germ.* 106; *T. Nees Gen. Fl. Germ. Monocot.* i. t. 16; *Knapp. Gram. Brit.* t. 1; *Engl. Bot.* t. 647; *Trin. Sp. Gram. Ic.* t. 14; *Ledeb. Fl. Ross.* iv. 408; *Boiss. Fl. Orient.* v. 470.

Occasionally found in the Hill districts of INDIA, but only as introduced by man or as an escape from cultivation.—Native of Europe and N. Asia.

Perennial, sweet-scented, especially when dry. *Stem* 6–18 in., tufted, erect or ascending. *Leaves* flat, hairy. *Panicle* 1–5 in., pubescent or villous. *Spikelets* ¼–⅓ in., fascicled, sometimes squarrosely, green; gl. I ovate, acute; II lanceolate; III and IV curved, obliquely truncate.—The glumes are often described as 6. The sixth, though 1-nerved, is, I think a palea, analogous to the 1-nerved palea of *Hierochloa* and of a few other grasses, the nerves being theoretically formed of two confluent ones.

58. **HIEROCHLOA,** *Gmel.*

Perennial, erect, sweet-scented grasses. *Leaves* flat. *Spikelets* 1–3-fld., laterally compressed, panicled, not jointed or their pedicels, rachilla not produced above gl. V. Glumes 5; I and II equal or unequal, 1–3-nerved, hyaline or scarious, shining, keeled; III and IV usually similar, awned, 2–3-androus or neuter; palea 2-nerved or 0; V fem. or bisexual, palea 1- (rarely 2-) nerved. *Lodicules* 2, small. *Anthers* linear. *Styles* free. *Grain* oblong, free within the gls.—Species 8–10, of temp. and cold regions.

* Panicle effuse. Spikelets long-pedicelled; gl. III IV and V hirsute and ciliate, III and IV paleate, palea narrow, male; V smaller; rachilla produced between the gls.

1. **H. laxa,** *Br. in Wall. Cat.* n. 3796; leaves ensiform acute, spikelets ¼ in. long, gl. I and II equal or subequal faintly nerved, III and IV truncate very shortly awned, V hirsute above the middle not awned. *Duthie Grass. N.W. Ind.* 25.

WESTERN HIMALAYA, from Kashmir, alt. 10–12,000 ft., to Kumaon, alt. 12–16,000 ft.

Stem 1–2 ft., ascending from a stout creeping rootstock. *Leaves* 6–10 by ⅓–½ in., quite smooth; ligule large, oblong. *Panicle* 3–5 in., lax, oblong, inclined; branches solitary or geminate and pedicels capillary. *Spikelets* much compressed, brown; gl. I 1-nerved; II faintly 3-nerved; IV sometimes fem. and diandrous; palea of V sometimes distinctly 2-nerved, but usually 1-nerved, more or less hispid.

2. **H. flexuosa,** *Hook. f.*; leaves narrowly linear, spikelets ¼ in. long, gl. I and II subequal acuminate 3-nerved, III 2-toothed very shortly awned, III acutely 2-fid awn longer than the gl., IV not awned villous in the upper half, palea 1-nerved.

SIKKIM HIMALAYA; Bijean, *King's Collector.*

Stem 2–2½ ft., erect, very slender. *Leaves* about ⅙ in. broad; ligule oblong. *Panicle* 2–3 in. long and broad, very lax-fld.; rachis branches and pedicels all capillary and flexuous. *Spikelets* much compressed, brown; gl. I and II lanceolate, III and IV with a ring of hairs on the callus; V 5-nerved; palea 2-toothed, hairy above the middle.

** *Panicle* contracted. *Spikelets* shortly pedicelled or sessile; gls. III and IV hirsute, paleate or epaleate, male or neuter; V much smaller, convolute, ovoid, glabrous, its palea linear, concave, 1-nerved; rachilla not produced between gl. II and IV.

3. **H. Hookeri,** *Clarke mss.*; spikelets ¼–⅓ in. long ovoid, gl. I and II very unequal acuminate, III shortly 2-fid shortly awned in the sinus paleate male, IV almost 2-partite epaleate neuter, segments lanceolate acute, awn in the sinus twice as long as the gl.—Ataxia Hookeri, *Griseb. in Goett. Nachr.* (1868) 77.

E. Nepal and Sikkim Himalaya; in marshes, alt. 9–11,000 ft., *J. D. H.*, *Gammie.*

Stem 6 in. 2 ft., erect, ascending or geniculate below, sometimes as thick as a crow-quill. *Leaves* long, narrow, smooth; ligule oblong. *Panicle* 5–7 in. long; branches erect, subsecund; pedicels very short. *Spikelets* greenish; gl. I 1-nerved; II 3-nerved; III and IV sessile; V stipitate, thinly coriaceous, subacute.

4. **H. gracillima,** *Hook. f.*; very slender, panicle small, spikelets ⅛–⅙ in. gl. I and II very unequal, III and IV epaleate neuter, III shortly bifid awn in the sinus very short, IV tip obtusely 2-toothed, awn nearly basal twice as long as the gl., palea of V 1-nerved.

Sikkim Himalaya, alt. 10–11,000 ft., *J. D. H.*

A much more slender grass than *H. Hookeri,* with short very narrow leaves 2–4 in. long, narrowed from the base to the tip. *Panicle* 1½–2 in. long, drooping; rachis flexuous; branches very short and few-fld. *Spikelets* yellow or purplish, very shortly pedicelled.

5. **H. khasiana,** *Clarke mss.*; slender, panicle very narrow, spikelets ⅛ in. long ovoid, gl. I and II subequal acuminate, III and IV epaleate neuter, III 2-fid to the middle, awn in the sinus as long as the gl. or shorter, IV 2-fid to the middle awn exceeding the gl.

Khasia Hills, alt. 4500–6000 ft., *Clarke.*

Stem 1–2 ft., ascending from a shortly creeping base. *Leaves* 4–6 by ⅛–¼ in., tapering from the base to the tip; ligule oblong. *Panicle* 1–4 in., very narrow; branches short, erect, few-fld. *Spikelets* greenish-brown, erect.

6. **H. Clarkei,** *Hook. f.*; tall, slender, panicle very narrow, spikelets ⅕ in. long oblong, gl. I and II very unequal ovate-oblong acute, III shortly 2-fid shortly awned in the sinus paleate neuter, IV bifid to below the middle epaleate neuter, awn in the sinus twice as long as the gl.

Khasia Hills, at Lailan Kote, alt. 5500 ft., *Clarke.*

Stem 2 ft., slender, geniculate below. *Leaves* 6–8 by ⅙–¼ in., narrowed from the base to the tip; ligule short. *Panicle* as in *H. khasiana,* but spikelets nearly twice as large and narrower in proportion, and gl. IV with a long exserted awn.

Tribe VI. AGROSTIDEÆ. (See p. 5.)

59. **ARISTIDA,** *Linn.*

Annual or perennial grasses. *Leaves* usually convolute. *Spikelets* panicled, 1-fld., rachilla (or callus of fl. gl.) articulate at the base. *Glumes* 3, I and II empty, very narrow, keeled, persistent; III narrow, rigid, cylindric, convolute, acuminate, tip produced into a long 3-partite (very rarely simple) naked or feathery awn twisted below the branches; palea very narrow, embraced by the gl., sometimes minute or 0. *Lodicules* 2. *Stamens* 3. *Styles* distinct. *Grain* narrow, free within the closely convolute gl.—Species (assumed) about 100, natives of warm countries.

The species and synonymy as given below have been revised by Dr. Stapf with the Oriental and African.

Sect. I. CHÆTARIA. *Awn* tripartite from the base, not or imperfectly articulate with the top of the gl., persistent, glabrous.

1. **A. Cumingiana,** *Trin. & Rupr. in Mem. Acad Petersb. Ser.* VI. vii. (1849) 134; annual, dwarf, panicle very slender, spikelets (without the awns) $\frac{1}{12}$–$\frac{1}{10}$ in., awn inarticulate at the base. *Steud. Syn. Gram.* 140; *Miq. Fl. Ind. Bat.* iii. 381; *Hance in Journ. Linn. Soc.* xiii. (1873) 135. A. capillacea, *Cav. Ic.* v. 43, t. 468, f. 1 (*non Lamk.*); *Steud. l. c.* 134. A. delicatula, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 293; *Steud. l. c.* 139. A. tenella, *Kurz in Herb. Calcutt.* A. trichodes, *Walp. Ann.* iii. 753; *Miq. l. c.* 380; *Steud. l. c.* 140. Chætaria trichodes, *Nees in Hook. Kew Journ.* ii. (1850) 101.

W. BENGAL, *Kurz.* CHOTA NAGPORE, *Clarke.* PEGU, *Kurz;* on the Shan Hills, *Collett.*—DISTRIB. China, Philippines, Afr. trop.

Stem 3–10 in., tufted, very slender. *Leaves* filiform. *Panicle* subcylindric, narrow, loosely branched, rachis branches and pedicels capillary, scaberulous. *Spikelets* green or purplish; gls. acuminate, II longest; III as long as I, scaberulous; arms of awn twice as long as the gls., capillary, median longest.

2. **A. Adscenscionis,** *Linn. Sp. Pl.* 82 (*excl. Syn. Sloane*); annual or perennial, panicle contracted, branches short or elongate and naked below, spikelets (excl. awns) $\frac{1}{4}$–$\frac{1}{3}$ in. acute, gl. I acuminate not awned, II obtuse or emarginate and mucronate, awn inarticulate at the base. *Kunth Enum. Pl.* i. 190; *Steud. Syn. Gram.* 139.

Throughout the Plains and low Hills of INDIA, BURMA and CEYLON, ascending to 8000 ft. in Kashmir.—DISTRIB. Most warm countries.

Stems 6 in. —3 ft., tufted, usually almost filiform, rarely as thick as a crow-quill, smooth. *Leaves* very narrow, smooth or scaberulous. *Panicle* 3–12 in., subsimple or compound, rachis and capillary branches nearly smooth; branches very short with subsessile fascicles of spikelets, or longer, and erect or spreading. *Spikelets* pale green or purplish; gl. I $\frac{1}{5}$–$\frac{1}{4}$ in., acute; II $\frac{1}{4}$–$\frac{1}{3}$ in., tip truncate mucronulate; III $\frac{1}{5}$–$\frac{3}{4}$ in., smooth or scabrid; middle branch of awn $\frac{1}{3}$–$\frac{2}{3}$ in., rarely 1 in.

Dr. Stapf, who has reviewed the whole genus, informs me that besides the following synonyms, which apply to Old World forms, there are in the New World 11 others under *Aristida,* and 14 under *Chætaria.*

Var. *typica,* Stapf. mss.; gl. III about as long as II. A. abyssinica, *Trin. & Rupr. in Mem. Acad. Petersb. Ser.* VI. vii. (1849) 134. A. cærulescens, *Desf. Fl. Atlant.* i. 109, t. 21, f. 2; *Kunth l. c.* 191, *Suppl.* 146; *Steud. l. c.* 138. *Boiss. Fl. Orient.* v. 491; *Duthie Grass. N.W. Ind.* 26. A. canariensis, *Willd. Enum. Pl.* 99. A. chætophylla, modatica, simplicissima & Teneriffæ, *Steud. l. c.* 139, 420. A. curvata, *Nees ex A. Rich. Tent. Fl. Abyss.* ii. 392. A. depressa, *Retz. Obs.* iv. 22; *Roxb. Fl. Ind.* i. 351; *Wall. Cat.* n. 3786; *Kunth. l. c.* 190, *Suppl.* 146; *Thw. Enum. Pl. Zeyl.* 370; *Trim. Cat. Ceyl. Pl.* 108; *Dalz. & Gibs. Bomb. Fl.* 295; *Aitch. Cat. Panjab Pl.* 164 (*excl. Syn.* setacea); *Benth. Fl. Austral.* vii. 503; *Duthie l. c. & Fodd. Grass. N. Ind.* 47, t. 30. A. divaricata, *Jacq. Eclog. Gram.* 7, t. 6 (*non Willd.*). A. elatior, *Cav. Ic.* vi. 65, t. 589, f. 1; *Kunth l. c.* i. 191. A. festucoides, *Hochst. et Steud. ex Trin. & Rupr.* (*non Poir.*). A.

gigantea, *Linn. f. Suppl.* 113; *Kunth l. c.* 194, *Suppl.* 150. A. Jacquiniana, *Tausch. in Flora* (1836) 508. A. Heymannii, *Regel in Act. Hort. Petrop.* vii. (1880) 649. A. Hystrix, *Duthie Fodd. Grass. N. Ind.* 47, t. 31 (*not of Linn. fil*). A. nutans, *Willd. Hort. Berol. ex Steud. Nomencl.* Ed. II. i. 131. A. paniculata, *Forsk. Fl. Æg. Arab.* 25 (*ex descript.*). A. pusilla, *Trin. et Rupr. in Mem. Acad. Petersb. Ser.* VI. vii. (1849) 140. A. setacea, *Trin. l. c.* i. (1831) 84 (*non Retz.*); *Wall. Cat.* n. 3785; *Steud. l. c.* 139. A. vulgaris, *Trin. & Rupr. in Mem. Acad. Petersb. l. c.* 131 (with 10 vars.) *Steud. l. c.* 138. Chætaria Ascenscionis, cærulescens, canariensis, depressa, elatior, & gigantea, *Beauv. Agrost.* 30. C. curvata & mauritiana, *Nees Fl. Afr. Austr.* 186, 188. C. Hystrix, *Wight Cat.* n. 1737 (*non Beauv.*).

Var. A. æthiopica, *Trin. & Rupr. l. c.* 167. A. Ehrenbergii, *Trin. & Rupr. Stipac.* 136; *Steud. l. c.* 138. A. festucoides, *Poir. Encycl. Suppl.* i. 453 (*ex Trin.*); *Kunth Enum. Pl.* i. 197. A. mutabilis, *var.* æquilonga, *Trin. & Rupr. in Mem. Acad. Petersb. Ser.* VI. vii. (1849) 150. A. pumila, *Dcne in Ann. Sc. Nat. Ser.* II. iv. (1835) 85; *Boiss. l. c.* 496; *Steud. l. c.* 138. A. spicigera, *Trin. & Rupr. l. c.* 136; *Steud. l. c.* A. vulgaris, *Trin. & Rupr. l. c. in part* (with 6 vars.). —*Aristida Wall. Cat.* n. 3788.

3. **A. setacea,** *Retz. Obs.* iv. 22; perennial, panicle contracted, spikelets (excl. awn) ½–⅔ in., gl. I and II long-awned, awn inarticulate at the base, middle branch ½–1½ in. *Kunth Enum. Pl.* i. 191 (*excl. Syn. depressa*), *Suppl.* 148; *Steud. Syn. Gram.* 141; *Roxb. Fl. Ind.* i. 349; *Wall. Cat.* n. 3785 A. B *in part*); *Grah. Cat. Bomb. Pl.* 218; *Dalz. & Gibs. Bomb. Fl.* 295; *Duthie Grass. N.W. Ind.* 27. A. adscendens, *Trim. Cat. Ceyl. Pl.* 108. A. arundinacea, *Roem. ex Retz. l. c.* (*non Linn.*). A. cœrulescens, *Thw. Enum. Pl. Zeyl.* 370. A. Hystrix, *Baker Fl. Maurit.* 451 (*excl. Syn.*). A. quinqueseta, *Steud. l. c.* 420. Chætaria setacea, *Beauv. Agrost.* 36. C. depressa, *Herb. Wight propr.* n. 1735.

WESTERN INDIA; from Behar and the Concan southwd. CEYLON; *Walker*, &c.—DISTRIB. Mascarene Islds.

Stem 3–4 ft., sometimes as thick at the base as a goose-quill, stout, erect, simple, or subfastigiately branched with open sheaths at the ramifications. *Leaves* filiform, convolute, scaberulous. *Panicle* 6–12 in., inclined; branches short, subsecund, scaberulous, usually fascicled and erect. *Spikelets* green or purplish; gl. I narrowed into a short awn; 2 minutely 2-toothed, awn short; III nearly smooth; beard of callus copious, white, silky.

4. **A. cyanantha,** *Steud. Nom. Ed.* II. i. 131; *Syn. Gram.* 141; tall stout, panicle effuse, branches flexuous widely spreading, spikelets (excl. awns) ⅓–½ in., gls. I and II shortly awned, awn of III not articulate with the gl. branches very long flexuous middle one up to 2½ in. *Trin. in Act. Acad. Sc. Petrop. Ser.* VI. v. (1842) 150; *Boiss. Fl. Orient* v. 492; *Duthie Grass. N.W. Ind.* 26 (*excl. Syn.*). Chaetaria cyanantha, *Nees in Royle Ill. Bot. Himal.* 424.

WESTERN HIMALAYA, alt. 3–5000 ft., from Kashmir to Kumaon; and low hills of the PANJAB.—DISTRIB. Affghanistan.

Perennial. *Stem* 3–6 ft., attaining the thickness of a swan's quill below. *Leaves* 6–12 by ⅕–⅓ in., at length convolute, quite smooth, glaucous; sheaths smooth. *Panicle* 12–18 in., very variable in amount of branching; branches 4–12 in., solitary or 2–3-nate, usually naked for 2–6 in., scaberulous. *Spikelets* usually dark purple; gls. I and II with nearly smooth keels, tip of II fimbriately toothed; III, callus hairs very few; awn minutely scaberulous.

5. **A. Hystrix,** *Linn. f. Suppl.* 113; perennial, panicle as broad as long branches distant rigid widely spreading, spikelets (excl. awns) ½–¾ in.,

gls. I and II. finely acuminate or awned, awn of III not articulate with the gl. branches very long rigidly flexuous middle one 1–2 in. *Trin. Diss.* i. 187, *in Act. Petrop.* (1829) 83, (1836) 47; *Kunth Enum. Pl.* i. 350, *Suppl.* 147; *Roxb. Fl. Ind.* i. 350; *Wall. Cat.* n. 3784; *Grah. Cat. Bomb. Pl.* 335; *Dalz. & Gibs. Bomb. Fl.* 295; *Steud. Syn. Gram.* 141. A. tripilis, *Thunb. Fl. Ceyl. Diss.* 2, *ex Trin. & Rupr. in Mem. Acad. Petersb. Ser.* VI. vii. (1849) 147. Chaetaria Hystrix, *Beauv. Agrost.* 30.

The DECCAN PENINSULA, from the Concan and Central Provinces southward. CEYLON (*Thunberg*).

Stem 6 in.–2 ft., as thick as a crow-quill or less, stiff, stout and erect or long inclined or prostrate and proliferously branched with open sheaths at the ramifications. *Leaves* 2-4 in., narrow, convolute, glaucous. *Panicle* 4–6 in.; rachis stout flexuous and angular, branches and branchlets smooth. *Spikelets* straw-colrd.; gls. I and II membranous or subchartaceous, keels smooth; II most minutely toothed at the base of the awn; III smooth, callus naked, awns most minutely scaberulous.—I have seen no Ceylon specimens, for which habitat Thunberg (fid. Trinius) is the authority.

6. **A. mutabilis,** *Trin. & Rupr. in Mem. Acad. Petersb. Ser.* VI. vii. (1849) 150 (excl. var. *æquilonga*); annual, panicle very narrow subcylindric, branches very short crowded, spikelets (excl. awns) $\frac{1}{4}$ in., gls. I and II shortly awned, awn of III obscurely articulate with the gl., column long, branches rather short, middle one about $\frac{1}{2}$ in. *Steud. Syn. Gram.* 141. A. articulata, *Edgew. in Journ. Linn. Soc.* vi. (1862) 209; *Aitch. Cat. Panjab Pl.* 164; *Duthie Grass. N.W. Ind.* 26, *Fodd. Grass. N. Ind.* 47. A. Kunthiana & meccana, *Trin. & Rupr. l. c.* 151 (*ex descr.*) 152; *Steud. l. c.* 141. A. Schweinfurthii, *Boiss. Fl. Orient.* v. 493. A. spicata, *Rottl. mss.* A. tenuis, *Hochst in Flora,* xxviii. (1855) 200.

The PANJAB & RAJPOOTANA; Multan, *Edgeworth*; Jodhpore, *King*. SOUTHERN INDIA, *Heyne, Wight,* &c.—DISTRIB. Arabia, Africa trop.

Stems 6–12 in., many ascending from the root, simple or proliferously branched, slender. *Leaves* 1–3 in., very slender, curved, convolute, rigid, smooth. *Panicle* 3–6 in., branches all very short and crowded, or with sometimes a few remote lower down or the stem ascending from a naked base and bearing a dense oblong fascicle of spikelets, rachis smooth, branches scaberulous. *Spikelets* very shortly pedicelled, pale green or straw-colrd.; gl. I $\frac{1}{5}$ in., keel scaberulous; II $\frac{1}{4}$ in., tip 2-toothed below the awn; III scaberulous, callus shortly bearded; column of awn nearly as long as the gl., slender, smooth, branches capillary.—King's specimens from Jodhpore are in a starved state and mixed with *A. Adscenscionis.*

Sect. II. ARTHRATHERUM. *Column of awn* long, twisted, articulate on the glume (obscurely in *A. redacta*), branches glabrous, rarely 0.

7. **A. funiculata,** *Trin. & Rupr. in Mem. Acad. Petersb. Ser.* VI. vii. (1849) 159; annual, very slender, panicle lax narrow, branches very short, gls. I and II $\frac{1}{2}$–1 in. subequal awned, column of awn 1 in. or less, branches capillary 1–3 in. *Steud. Syn. Gram.* 142; *Aitchis. Cat. Panjab Pl.* 164; *Boiss. Fl. Orient.* v. 492 (*in part*); *Duthie Fodd. Grass. N. Ind.* 47. A. funicularis, *Trin. ex Steud. Nomencl. Ed.* II. i. 131; *Edgew. in Journ. As. Soc. Beng.* xxi. (1852) 160, 163 (fœnicularis). A. Kotschyi, *Hochst. ex Steud. Syn. Gram.* 142. A. macrathera, *A. Rich. Tent. Fl. Abyss.* ii. 393; *Steud. l. c.* 142; *Boiss. l. c.* 493 (macranthera). A. mallica, *Edgew. in Journ. Linn. Soc.* vi. (1862) 209; *Aitch. l. c.*; *Duthie l. l. c. c.* A. murina, *Aitchis. l.c.* 164 (*non Cav.*); *Duthie Grass. N.W. Ind.* 26. A. paradoxa, *Schmidt Fl. Cap. Verd.* 140. A. pilosa, *Herb. Heyne* (*non Labill.*). A. Royleana, *Trin. & Rupr. in Mem. Acad. Petersb.*

VI. vii. (1849) 160; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1892) 358. A. stipacea, *Ehrenb. & Hempr. ex Trin. & Rupr. l. c.* Chaetaria murina, *Nees ex Trin. & Rupr. l.c.* 160. C. murina, β. villosa, *Nees ex Wight Cat.* n. 1736. C. Royleana, *Nees ex Steud. Syn. Gram.* 143. Arthratherum Kotschyi, *Hochst. ex Trin. l. c.*—Aristida, *Wall. Cat.* n. 3787.

Plains of the PANJAB from the Sutlej westward. RAJPOOTANA, and from the CONCAN southward.—DISTRIB. Beluchistan, Arabia, Trop. Africa.

Stems many, geniculately ascending, 10 in.–2 ft. *Leaves* very slender, flat or convolute, base ciliate with long hairs. *Panicle* 4–10 in., branches erect capillary. *Spikelets* variable in length, pale; gl. I rather shorter than II, keels scaberulous; III smooth, callus sparsely bearded or naked; column of awn very slender, minutely scaberulous, twisted, branches straight capillary.

Var. *Royleana*, leaves eciliate, spikelets smaller, on more distant spreading flexuous branches, gl. I $\frac{1}{2}$ in. or less, column of awn $\frac{1}{8}$–$\frac{1}{4}$ in., branches more unequal, longest $\frac{3}{4}$ in.—A. Royleana, *Trin. & Rupr. l. c.* 160; *Steud. l. c.* 143. Chaetaria Royleana, *Nees ex Steud. l. c.* Arthratherum Royleanum, *Edgew. ex Aitchis. l. c.* —The Panjab, Kangra, alt. 3000 ft., *Clarke.*

Var. ? *Stocksii*; gl. I = $\frac{1}{4}$ II.—Concan ? *Herb. Stocks.*

8. **A. hystricula,** *Edgew. in Journ. Linn. Soc.* vi. (1862) 208; dwarf, very slender, 1–2 in. high, panicle very small narrow much shorter than the awns, gls. I and II $\frac{1}{5}$ in. subequal or I shorter aristately acuminate, column of awn $\frac{1}{4}$ in. twisted, branches subequal $\frac{1}{2}$–$\frac{2}{3}$ in. *Aitchis. Cat. Panjab Pl.* 164; *Duthie Grass. N.W. Ind.* 26, *Fodd. Grass. N. Ind.* 47. A. funiculata, *Boiss. Fl. Orient.* v. 493 (the Beluchist plant only).

The PANJAB; Multan, *Edgeworth.* SCIND; near Kurrachee, *Stocks.*—DISTRIB. Beluchistan.

Annual. *Stems* very many from the root, $\frac{1}{2}$–1 in., densely crowded. *Leaves* subulate, curved, convolute, acuminate, glabrous. *Panicle* without the awns $\frac{1}{2}$–1 in.; branches few, short, erect. *Spikelets* erect; gls. I and II very narrow; callus of III minute, glabrous; column of awn capillary, twisted, smooth, branches of extreme tenuity.

9. **A. redacta,** *Stapf in Kew Bullet.* (1892) 85; stems tufted, tall or short, panicle large effuse, branches spreading, gls. I and II subequal shortly awned about $\frac{1}{2}$ in. long, II deciduous, column of awn capillary twisted, branches 0 or very short. A. depressa, *Retz. Herb. Ind. Or. Hf. & T. in part.* Stipa aristoides, *Stapf ex Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1892) 358.

LOWER BENGAL; Burdwan, *Clarke.* The CONCAN, CENTRAL INDIA, and the CENTRAL PROVINCES, *Stocks, Law,* &c.—DISTRIB. S. Persia.

Annual. *Stems* 6 in.–2 ft., rather stout or slender, densely tufted, simple, or proliferously branched in robust specimens. *Leaves* 4–8 in., very slender, convolute, ciliate with long hairs at the base. *Panicle* 6–12 in., rachis slender smooth; branches usually binate, capillary, flexuous, smooth, erect or spreading, each with one or few spikelets. *Spikelets* on short or long capillary pedicels, green or purplish; column of awn gradually dilating below, 3-nerved, convolute and passing into the glume from the top of which it separates readily but without an indication of the joint.

Sect. III. STIPAGROSTIS. *Awn* feathery.

10. **A. hirtigluma,** *Steud. Nom. Ed.* II. ii. 231, *Syn. Gram.* 144; very slender, panicle narrow strict or flexuous, branches very short, gl. I and II unequal, III muriculate, awn capillary plumose middle branch $1\frac{1}{2}$ in. lateral much shorter naked of extreme tenuity. *Trin. & Rupr. in Mem. Acad. Petersb. Ser.* VI. v. (1842) 171; *Aitchis. Cat. Panjab Pl.* 164;

Duthie Grass. N.W. Ind. 26, *Fodd. Grass. N. Ind.* 47; *Boiss. Fl. Orient.* v. 496. A. ciliata, *Steud. & Hochst. ex Steud. Nom. Ed.* II. i. 131 (*non Desf.*). A. decorata, *Steud. Syn. Gram.* 421. A. paradisea, *Edgew. in Journ. As. Soc. Beng.* xvi. (1847) ii. 1219. A. pogonoptila, *Boiss. l. c.* A. Schimperi, *Hochst. et Steud. ex Steud. l. c.* 143. Arthratherum ciliatum, *Nees in Linnæa*, vii. (1832) 287, *Fl. Afr. Austr.* i. 182. Arth. elatum, *Boiss. Diagn. Ser.* II. iv. 128. Arth. hirtiglume & pogonoptilum, *Jaub. & Spach, Ill. Pl. Orient.* iv. 52, 56. Arth. Schimperi, *Nees Fl. Afr. Austr.* 178.

The PANJAB, *Jacquemont*, *Falconer*, &c. PESHAWUR, &c., *Stewart.* SCIND, *Herb. Calcutt.*—DISTRIB. Westward to Egypt and Abyssinia.

Perennial. *Stem* stout at the base, slender and 1–2 ft. high. *Leaves* 3–8 in., convolute, filiform, flexuous, tips capillary. *Panicle* very slender, branches very short, erect, capillary. *Spikelets* pale green or straw-colrd.; gls. I and II not or hardly awned, hairy or glabrous; I ⅓ in.; II rather shorter; III muriculate, callus bearded; awn straight, articulate in the gl., column twisted, plumose as well as the middle branch.

11. **A. plumosa,** *Linn. Sp. Pl. Ed.* II. 1666; stem slender, panicle narrow, branches very short, gls. I and II subequal, III glabrous smooth, awn capillary middle branch 2–3 in. plumose above naked below, lateral much shorter naked of extreme tenuity. *Vahl Symb.* i. 11, t. 3; *Trin. Diss.* i. 181, ii. 26; *in Act. Petrop.* (1829) 89; *Trin. & Rupr. l. c. Ser.* VI. v. (1842) 165; *Kunth Enum. Pl.* i. 195, ii. 151; *Steud. Syn. Gram.* 143; *Aitchis. Cat. Panjab Pl.* 164; *Boiss. Fl. Orient.* v. 495; *Duthie Grass. N.W. Ind.* 26, *Fodd. Grass. N. Ind.* 47. A. brachypoda & Forskahlii, *Tausch. in Flora* (1836) 506; *Boiss. l. c.* 495, 496. A. lanata, *Forsk. Fl. Ægypt. Arab.* 25. A. Raddiana, *Savi in Mem. Moden.* (1837) 198; *Steud. l. c.* 144. Arthratherum plumosum, *Nees Fl. Afr. Austr.* i. 182.

WESTERN TIBET; Iskardo, alt. 7700 ft., *Clarke.*—DISTRIB. Turkestan, Persia, N. Africa.

Perennial. *Stem* 1–2 ft., from a stout branching woody stock with stout rigid roots. *Leaves* 2–6 in., rigid, filiform, convolute, flexuous. *Panicle* 2–3 in. (excl. the awns) very narrow. *Spikelets* erect; gls. I and II ⅓ in., not awned; III callus bearded, column of awn ⅓ in., very slender, hardly twisted, glabrous; middle branch strict, silvery, lower ⅓ naked, lateral about ⅓ in. long.

UNDETERMINABLE SPECIES.

A. RIGNESCENS, *Roem. & Schult. Syst.* ii. 400; *Steud. Syn. Gram.* 141. A. rigida, *Heyne ex Roth. Nov. Sp.* 42 (*non Cav.*); *Kunth Enum. Pl.* i. 197. Arthratherum rigidum, *Schult. Mant.* ii. 212).—May be *A. Hystrix.*

60. **STIPA,** *Linn.*

Tufted perennial grasses. *Leaves* usually convolute. *Spikelets* loosely panicled, terete, 1-fld., rarely dorsally compressed, rachilla forming a thickened or narrow callus below gl. III. *Glumes* 3, I and II empty, persistent, keeled, acute, rarely awned; III rigid, convolute, terete, narrowed into an entire or notched or 2-fid tip, with a long terminal bent usually deciduous awn, column of awn twisted rarely straight; palea 2-nerved, closely embraced by the gl. *Lodicules* 3, large. *Stamens* 1–3, tips of anther-cells bearded or naked. *Grain* narrow, terete, free within but tightly embraced by the gl. and palea.—Sp. about 100, temperate and tropical.

Dr. Stapf has aided me greatly in this difficult genus.

A. Column of awn twisted.

* Awn plumose or hairy throughout its length or nearly so.

1. **S. orientalis,** *Trin. ex Ledeb. Fl. Alt.* i. 83; panicle narrow more or less embraced by the dilated sheath of the uppermost leaf, spikelets ½ in., gls. I and II about twice as long as the silkily hairy III. *Ledeb. Ic. Fl. Ross.* t. 223; *Trin. in Act. Acad. Petersb.* VI. i. (1830) 79; *Kunth Enum. Pl.* i. 185; *Steud. Syn. Gram.* 131; *Boiss. Fl. Orient.* v. 504; *Duthie Grass. N.W. Ind.* 27. S. Semenovii, *Krassn. Descr. Pl. Thiansch. in Script. Bot. Hort. Univ. Petrop.* ii. 22. S. Szovitziana, *Duthie l. c.* 27 (*non Trin.*). S. tartarica, *Jacquem. mss.*

WESTERN TIBET, alt. 10–15,000 ft., *Jacquemont, &c.*—DISTRIB. Westward to Persia. Altai Mts.

Stems 6–14 in., forming dense hard tufts, clothed below with shining sheaths. *Leaves* 4–10 in., filiform, tips long capillary; sheath of uppermost, 4–6 by ⅙–¼ in. broad. *Panicle* elongate, branches and pedicels short, erect. *Gls.* I and II hyaline, ⅓–½ in. long, tips slender; I 1-nerved or 3-nerved at the base; II 3-nerved; III cylindric, callus = about ⅙ of the gl., bearded; awn plumose throughout its length, nearly straight, column about ¼ of its length.—Probably a form of *S. barbata.* Said to be the commonest grass on the Pamir.

2. **S. basi-plumosa,** *Munro mss.*; panicle very narrow, branches and pedicels very short, spikelets purple, gl. I and II ¼–⅓ in., III about ⅓ shorter than II sparsely hairy, awn capillary twice or thrice as long as the spikelet very densely bearded towards the base.

WESTERN TIBET; Nubra, and the Lanak Pass, alt. 15–17,000 ft., *Thomson.*

Stems 6–16 in., densely tufted, slender, strict. *Leaves* 4–6 in., convolute, filiform, slightly scabrid. *Panicle* 2–6 in., sometimes sheathed; branches and spikelets distant; gl. I and II ovate-lanceolate finely acuminate, tip and margins white hyaline; I 3-nerved at the base; II 3-nerved; callus of IV = about ⅛ of the gl.; awn very delicately plumose upwards with spreading hairs, column slightly twisted.

Var. *longe-aristata,* Munro mss.; gl. I and II ⅓ in., awn 1¼ in.—Western Tibet, *Thomson.*

3. **S. purpurea,** *Griseb. in Goett. Nachr.* (1868) 82; spikelets few purple on long capillary sigmoidly flexuous pedicels, gl. I and II ⅔–1 in., III about ⅓ shorter than II softly hairy, awn 2½–3 in. flexuous. S. Richteriana, *Herb. Ind. Or. Hf. T.*; *Duthie Grass. N.W. Ind.* 27 (*not Kar. & Kir.*). Lasiagrostis tremula, *Ruprecht Sert. Thiansch.* 35.

WESTERN TIBET; Gnari Khorsum, alt. 17,000 ft., *Schlagintweit*; Lake Rukshun, 15,000 ft., *Lance.*—DISTRIB. Thianschal Mts., in Central Tibet, alt. 16,000 ft., *Thorold.*

Stems densely tufted, 6–10 in., filiform, sheathed below the panicle. *Leaves* 2–4 in., filiform, convolute; ligule elongate. *Spikelets* very few, hardly forming a panicle, branches and pedicels ½ in. or more, sometimes zigzag. *Gls.* I and II narrowly lanceolate, dark purple with slender hyaline tips; III callus = ⅙ of the gl., villous. *Anther-tips* naked.

4. **S. mongolica,** *Turcz. ex Trin. in Bull. Sc. Acad. Petersb.* i. (1836) 67; panicle open with few distant widely spreading capillary flexuous branches, spikelets ⅛–⅙ in. ovate dorsally compressed, gls. I and II purple below the middle hyaline above it, III hairy, awn about twice as long as the gls. *Steud. Syn. Gram* 132; *Duthie Grass. N.W. Ind.* 27. Lasiagrostis mongholica, *Trin. ex Rupr. in Mem. Acad. Petersb. Ser.* VI. *Sc.*

Nat. v. (1842) 87. L. alpina, *F. Schmidt Reise Amurl.* 73. Ptilagrostis mongholica, *Griseb. in Ledeb. Fl. Ross.* iv. 447, in *Goett. Nachr.* (1868) 82.

ALPINE HIMALAYA; Kumaon, alt. 14,000 ft., *Strachey & Winterbottom.* N. Sikkim, alt. 14–16,000 ft., *J. D. H.* WESTERN TIBET; Ladak, alt. 13,000 ft., *Thomson*, *Lance.*—DISTRIB. Altai Mts. Mongolia.

Stems 1–2 ft., densely tufted, very slender. *Leaves* 4–6 in., almost capillary, flexuous. *Panicle* 4–6 in., branches solitary, lower 1–3 branching at the ends. *Spikelets* ovoid, pedicels ¼ in.; gls. I and II oblong-lanceolate, acute; I 1-nerved or 3-nerved below; II nerves 3, very slender; III about ⅓ shorter than II, hairy all over; awn twice as long as the spikelets or more, hairy to the tip. *Anther-cells* with bearded tips.

5. **S. concinna,** *Hook. f.*; panicle small few-fld. contracted, branches and pedicels short erect, spikelets ¼ in. ovoid dorsally compressed purple, gls. I and II ovate acute tips hyaline, III glabrous, awn about twice as long as its gl.

SIKKIM HIMALAYA, in the Tibetan Region, alt. 14–16,000 ft., *J. D. H.*

Stem 6–10 in., rather stout. *Leaves* 2–4 in., filiform, flexuous. *Panicle* 1–1¼ in., solitary, branches and pedicels erect. *Gl.* I and II acuminate; I 1-nerved II 3-nerved; awn hairy to the tip. *Anther cells* with bearded tips.

** Awn plumose above the column only.

6. **S. pennata,** *Linn. Sp. Pl.* 78; panicle narrow sheathed, gl. I and II subequal cuspidately awned, III = ⅓ II glabrous above, awn 6–9 in. flexuous plumose above the column only. *Host Gram. Austr.* iv. 19, t. 33; *Engl. Bot.* t. 1356; *Trin. in Act. Petrop.* (1829) 32; *Trin. & Rupr. l. c.* vii. (1842) 80; *Kunth Enum. Pl.* i. 179; *Reichb. Ic. Fl. Germ.* 46; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 26; *Ledeb. Fl. Ross.* iv 450; *Boiss. Fl. Orient.* v. 502. S. aperta, appendiculata, gallica & tauricola, *Janka ex Celak in Œstr. Bot. Zeitschr.* xxxiii. (1883) 317, 319, 349. S. eriocaulis, *Borb. in Œstr. Bot. Zeitschr.* xxxiii. (1883) 401. S. Grafiana, & Tirsa, *Stev. in Bull. Soc. Nat. Mosc.* xxx. ii. 115, 116. S. pulcherrima, *C. Koch in Linnæa*, xxi. (1848) 440.

WESTERN TIBET; Gilgit, alt. 9–10,000 ft., *Giles.*—DISTRIB. Westwd. to the Atlantic. N. Asia.

Stem 2–3 ft., densely tufted. *Leaves* 12–18 in., rigid, convolute, sheaths smooth or rough; ligule oblong. *Panicle* few-fld., branches short. *Spikelets* about 1 in. long; gl. I and II hyaline, tips almost capillary; III hirsute, callus ⅕ in. long; awn twisted and glabrous from the lower third.

*** Awn glabrous or scaberulous, or hairy on the column only.

† *Tip of gl. III entire.*

7. **S. capillata,** *Linn. Sp. Pl. Ed.* II. 116; panicle very narrow sheathed, spikelets 1 in., gl. II longer than I, III=about ½ II glabrous above, awn 6–8 in. flexuous smooth glabrous throughout. *Host Gram. Austr.* iii. 4, t. 5; *Reichb. Ic. Fl. Germ.* t. 46; *Kunth Enum. Pl.* i. 180, *Suppl.* 133; *Trin. & Rupr. in Act. Petrop. Ser.* VI. v. (1842) 72, t. 55; *Ledeb. Fl. Ross.* iv. 449; *Steud. Syn. Gram.* 130; *Boiss. Fl. Orient.* v. 500. S. capillaris, *Gronov. ex Trautv. in Act. Hort. Petrop.* ix. (1848) 350. S. erecta, *Hort. Madr. ex Trin. Diss.* i. 186, *in Mem. Acad. Petersb.* vi. I. (1829) 81. S. juncea, *Lamk. Illust.* i. 157. S. Lagascae, *Guss. Pl. Rar.* 48, *Fl. Sic.*

Prodr. i. 132 (*ex Bertol.*). S. sareptana, *Beck. in Bull. Soc. Nat. Mosc.* lvii. (1882) 52. S. ukranica, *Steud. Nom. Ed.* I. 816. S. ukranensis, *Lamk. l. c.* S. Varonini, *Krassn. in Script. Bot. Hort. Univ. Petrop.* ii. 22.

WESTERN HIMALAYA; Kashmir, alt. 9–11,000 ft., *Jacquemont*, &c.—DISTRIB. Westwd. to Spain. Dahuria. China.

Stem 2–3 ft., rather stout. *Leaves* 1–2 ft., filiform, convolute, scaberulous; ligule lanceolate. *Panicle* very narrow, more or less enclosed in a sheath, which is 6–10 in. long with a filiform blade often as long as itself; branches and pedicels short. *Spikelets* white, glistening, hyaline, gl. I and II very narrow, with finely acuminate tips; I 5-nerved below; II 5-nerved; III ½ in. long, nerves pubescent below, above and palea quite glabrous; callus nearly half as long as its gl., scabrid, top bearded. *Anther* cells with naked tips.—Dr. Stapf informs me that the N. America *S. comata,* Trin. & Rupr. might be referred here.

8. **S. sibirica,** *Lamk. Illustr.* i. 158; tall, leaves long flat, panicle elongate very narrow branches erect, spikelets ¾–⅓ in. green lanceolate, gls. I and II oblong-lanceolate, III hairy, awn about twice as long as the spikelet rather stout hairy towards the base only. *Kunth Enum. Pl.* i. 185; *Trin. in Act. Petrop.* (1829) 78; *Trin. & Rupr. l. c.* 1842, 59; *Ledeb. Fl. Ross.* iv. 448, *Ic. Fl. Ross.* t. 99; *Steud. Syn. Gram.* 129; *Boiss. Fl. Orient.* v. 499; *Duthie Fodd. Grass. N. Ind.* 27. Avena sibirica, *Linn. Sp. Pl.* 79; *Gmel. Fl. Sibir.* i. t. 12.

WESTERN TEMPERATE HIMALAYA, from Kashmir to Kunawur, alt. 8–9000 ft., *Falconer*, &c.; Black Mts., *Duthie.*—DISTRIB. Affghan. Siberia to Korea.

Stem 2–3 ft., as thick as a duck's quill or more, simple or branched. *Leaves* 1–2 ft. by ⅛–⅓ in., smooth; ligule oblong. *Panicle* 6–12 in., inclined; branches erect and appressed, rarely spreading, scaberulous; pedicels usually shorter than the terete spikelet. *Gls.* I and II subhyaline, III nearly as long as II, terete or slightly dorsally flattened; palea as long as its gl., linear, obtuse, dorsally hairy; callus short, conical. *Anther-tips* bearded.

Var.? *pallida*; very slender, leaves filiform, spikelets ⅕–¼ in. pale, gl. III half as long as II, awn capillary three to four times as long as the spikelet. S. pallida, *Munro ex Duthie Grass. N.W. Ind.* 27 (name). S. sibirica, *Linn. var. Herb. Strachey & Winterbottom.*—Tibet, N. of Kumaon, alt. 15,000 ft., *Strach. & Winterb.*—The specimens are very scanty and want radical leaves.

9. **S. tortilis,** *Desf. Fl. Atlant.* i. 99, t. 31; annual, panicle partially sheathed dense-fld. almost spiciform, spikelets fascicled, gl. I and II subequal much longer than IV setaceously linear, III linear hairy or scabrid, awn 2–4 in. straight column only hairy, callus long acute. *Trin. in Act. Petrop.* (1829) 78, 185, *Trin. & Rupr. l. c.* VI. v. (1842) 64; *Kunth Enum. Pl.* i. 180; *Steud. Syn. Gram.* 130; *Boiss. Fl. Orient.* v. 500. S. capensis, *Nees Fl. Afr. Austr.* i. 170. ?*Thunb. Prodr. Pl. Afr. Austr.* 109. S. humilis, *Brot. Fl. Lusit.* i. 86 (*non Cav.*). S. paleacea, *Sibth. & Sm. Prodr. Fl. Græc.* i. 65; *Fl. Græc.* i. t. 86 (*non Vahl*). S. seminuda, *Vahl ex Hornem. Hort. Hafn.* i. 76.

The PANJAB; Peshawur and Wazuristan, *Stewart.*—DISTRIB. Westwd. to the Atlantic. S. Africa.

Stem very slender, tufted, 4–6 in. *Leaves* filiform. *Panicle* 1–4 in., sheath sometimes ¼ in. broad or more. *Spikelets* ¾–1 in.; gl. I and II 3-nerved; callus of III = ⅓ of the gl. bearded at the top only; column of awn hairy throughout its length. *Anthers* with bearded tips.

†† *Tip of gl. III 2-fid or 2-toothed.*

10. **S. Jacquemontii,** *Jaub. & Spach, Ill. Pl. Or.* iv. 60, t. 639; leaves convolute filiform, panicle narrow rachis and lax-fld. branches filiform, spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. linear-lanceolate, gl. I and II subequal lanceolate acuminate, III half as long as II terete villous, awn capillary geniculate 3–4 times as long as the spikelet villous at the base. Lasiagrostis Jacquemontii, *Munro ex Boiss. Fl. Orient.* v. 506.

N. W. HIMALAYA; Kashmir, Astor, Tilail, &c., alt. 8–9000 ft., *Jacquemont*, &c. WESTERN TIBET; Piti, *Thomson.*—DISTRIB. Affghanistan.

Stems densely tufted, erect, 10–18 in., very slender. *Leaves* 6–10 in., erect, subflexuous; ligule a very short membrane. *Panicle* 4–6 in. long, erect or slightly inclined, branches erect few-fld. *Spikelets* erect, green or purplish, pedicels rather shorter than the spikelets; gl. I and II 3-nerved; III $\frac{1}{8}$ in., terete, villous all over; tip 2-toothed; awn 1–1$\frac{1}{4}$ in. twisted below the knee; callus very short, conical, villously bearded; palea much shorter than the gl. *Anther-tips* bearded.

11. **S. Duthiei,** *Hook. f.*; tall, very slender, leaves very long and narrow, panicle long narrow few-fld., rachis and long pedicels capillary, spikelets $\frac{1}{3}$–$\frac{1}{2}$ in., very narrow, gl. I and II subequal very narrowly lanceolate, III sparsely hairy, awn capillary nearly straight about twice as long as the spikelet.

WESTERN HIMALAYA; Garwhal, alt. 12–13,000 ft., *Duthie* (n. 273).

Stem 3–5 ft., tufted. *Leaves* 12–18 in. or more, $\frac{1}{12}$–$\frac{1}{10}$ in. broad, flat, or the lower convolute; ligule large, oblong, obtuse. *Panicle* 8–10 in., branches bearing one or two erect spikelets at the extremity, lower branches 3 in. *Spikelets* pale, glistening; gl. I 3-nerved; II 5-nerved; III about $\frac{1}{3}$ shorter than II, tip minutely 2-fid; awn $\frac{2}{3}$ in., hairy at the twisted base; callus short, conical, oblique, bearded; palea nearly as long as the gl., glabrous. *Anther-tips* bearded.

12. **S. Hookeri,** *Stapf in Journ. Linn. Soc.* xxx. (1894) 121; tall, robust, leaves convolute, panicle oblong loosely branched, branches many-fld., spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. longer than their pedicels, gl. I and II subequal oblong-lanceolate acute minutely scaberulous, IV sparsely hairy or villous, awn about as long as the gl. scaberulous. S. robusta, *Duthie Grass. N.W. Ind.* 27 (*name*). Lasiagrostis robusta, *Munro mss. ex Duthie l.c.* (*name*).

WESTERN TIBET; in wet places, alt. 10–14,000 ft., *Jacquemont*; Nubra, *Thomson.* TIBETAN SIKKIM, alt. 15–16,000 ft., *J. D. H.*—DISTRIB. Central Tibet, alt. 14,800 ft., *Thorold.*

Stems 3–4 ft., densely tufted, as thick as a swan's quill at the base, hard, leafy upwards. *Leaves* 1–2 ft., smooth or scaberulous; ligule $\frac{1}{3}$ in., oblong. *Panicle* 3–10 in., inclined; branches 2–4-nate, suberect, and rachis and pedicels smooth. *Spikelets* yellowish or purplish; gl. I broadest, 1–3-nerved; II 3-nerved; III rather shorter than II, terete, 5-nerved; awn more or less curved, slender, hardly twisted towards the base; palea nearly as long as the gl., hairy; callus small, conical, bearded. *Anther-tips* naked or minutely bearded.—In the specimen from Northern Sikkim the stem at the base is as thick as the thumb, the leaves and stems shorter, and panicle sometimes contracted oblong and dense-fld., the short branches crowded, and the spikelets very shortly pedicelled; their gl. III is deeply 2-fid, with equal or unequal setaceous-pointed lobes.

B. Column of awn not twisted. (See also *S. Hookeri.*)

13. **S. splendens,** *Trin. in Spreng. Neue Entdeck.* ii. 54; *Diss.* i. 183, in *Act. Petrop.* (1830) i. 76; tall, robust, leaves convolute, panicle

very large effuse or contracted, spikelets $\frac{1}{5}$ in. sessile or shortly pedicelled, gls. I and II oblong-lanceolate unequal, III tip 2-fid, awn $\frac{1}{4}$–$\frac{1}{3}$ in. *Duthie Grass. N.W. Ind.* 27; *Steud. Syn. Gram.* 132. S. altaica, *Trin. ex Ledeb. Fl. Alt.* i. 80, in *Act. Acad. Petrop.* 1829, 74; *Ledeb. Ic. Fl. Ross.* t. 222; *Kunth Enum. Pl.* i. 184. Lasiagrostis splendens, *Kunth Revis. Gram.* i. 58, *Enum. Pl.* i. 178; *Trin. Sp. Gram. Ic.* 89; *Griseb. in Goett. Nachr.* 82. Agrostis longiaristata, *Herb. Ross. ex Kunth Enum. l. c.*

WESTERN TIBET, alt. 8–12,000 ft., *Falconer*, &c.—DISTRIB. Siberia.

Stem 3–5 ft., as thick as a goose-quill below, yellow, shining; roots very stout, vermiform. *Leaves* 6–12 in., and sheaths smooth or scaberulous, acuminate, lower sheaths long loose; ligule elongate. *Panicle* 12–18 in., pyramidal when open; rachis slender, smooth; branches semi-verticillate, capillary, 4–10 in., simple below, branched above. *Spikelets* white or dull purplish; gl. I and II subacute; I 1-nerved; II longest, 3-nerved, III and palea villous; callus short, conical; awn $\frac{1}{4}$–$\frac{1}{3}$ in., not twisted. *Anther-tips* bearded. *Lodicules* 3, oblong, very minute.—A small state collected in Balti by Schlagintweit and in the Karakoram, alt. 9000 ft. by Clarke, is only 18 in. high, with an open panicle 3–6 in. long, and pale purple spikelets.

14. **S. Orthoraphium,** *Steud. Syn. Gram.* 131; stem slender, leaves flat or convolute, panicle very narrow, branches few erect few-fld., spikelets $\frac{1}{3}$–$\frac{1}{4}$ in., gl. III as long as II sparsely hairy tip entire, awn glabrous with 2 or more deflexed spinules towards the base. Orthoraphium Roylei, *Nees in Proc. Linn. Soc.* i. (1841) 94, *in Ann. & Mag. Nat. Hist.* (1841) 221. —Streptachne? *Wall. Cat.* n. 3795.

TEMPERATE HIMALAYA; from Kashmir to Sikkim, alt. 7–11,000 ft., *Wallich*, &c. NAGA HILLS, alt. 10,000 ft., *Clarke*.

Stems densely tufted, 18–24 in. *Leaves* 6–12 in., $\frac{1}{10}$–$\frac{1}{6}$ in. broad, and sheaths quite smooth; ligule short, ciliate. *Panicle* 6–10 in., rachis erect; branches solitary or binate, lower 1–3 in. bearing few distant, narrow, terete, pedicelled spikelets; gls. subequal, 1- or faintly 3-nerved, obtuse or tips sub-dentate; III very narrow, subrostrate; callus short, obconic, bearded; awn 1 in., rather stout, not twisted, nearly smooth, jointed on the gl. but persistent. *Lodicules* 3, large, oblong, obtuse.

DOUBTFUL SPECIES.

S. BREVIFLORA, *Griseb. in Goett. Nachr.* (1868) 82; stems 1–1½ ft., leaves short convolute, ligule short obtuse, panicle narrow base sheathed, branches 1–2-nate distant, gls. I and II linear-lanceolate acuminate, III seriately hairy, awn 2 in., hairs towards its base shorter.—Western Tibet, Gnari Khorsum, *Schlagintweit*. Probably *S. orientalis*, Trin.

61. ORYZOPSIS, *Michx.*

Perennial grasses. *Leaves* flat or convolute. *Spikelets* loosely panicled, ovoid or lanceolate, dorsally compressed, 1-fld. *Glumes* 3, I and II equal or subequal, acute or subrostrately acuminate, very thin; I 5-nerved; II sub 3-nerved; III shorter, coriaceous, articulate by a short broad glabrous basal callus, lanceolate or oblong-lanceolate, more or less pubescent, tip minutely 2-toothed, with a very slender often caducous untwisted awn; palea oblong, coriaceous, as long as the gl., glabrous or hairy. *Lodicules* 2, ovate, thin. *Stamens* 3, anther-tips minutely bearded. *Grain* dorsally compressed, oblong, free within the hardened gl. and palea. —Species about 16, N. temp. regions.

The species are very variable, and great as is dissimilarity between the average states of the following, apparent intermediates between them occur.

1. **O. lateralis,** *Stapf*; very slender, leaves short filiform convolute, panicle very narrow strict, branches short erect few-fld., spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. ovoid subrostrately acuminate, gl. I longer than II, awn of III $\frac{1}{10}$–$\frac{1}{5}$ in. very caducous. Piptatherum laterale, *Munro ex Regel in Act. Hort. Petrop.* vii. (1880) 645; *Aitchis. in Journ. Linn. Soc.* xviii. (1881) 21, 106. P. molinioides, *Boiss. Fl. Orient.* v. 509 (*The Afghan. pl.*). P. soongaricum, *Munro in Herb. Kew.* P. strictum, *Munro in Cat. Pl. Griff. Falcon.*, &c. 56 (*ined.*). Milium laterale, *Regel. l. c.*

WESTERN HIMALAYA; from Kashmir to Kunawur and WESTERN TIBET, alt. 12–14,000 ft.—DISTRIB. Affghanist.?

Stems densely tufted, forming a stout branching base, very slender, smooth. *Leaves* 2–4 in., smooth or nearly so, acuminate, strict or flexuous; ligule oblong, hyaline. *Panicle* 4–10 in., thin, rachis smooth, branches and pedicels scaberulous. *Spikelets* ovoid or ovate-lanceolate, green or tipped with red-purple; gls. I and II subrostrately acuminate, faintly 5-nerved, pair next the midrib arching and anastomosing with the median, outer pair similarly arching the last lower down; II more obscurely 3–5-nerved; III about $\frac{1}{3}$ shorter than II, lanceolate, finely subsilkily pubescent, tip minutely 2-toothed; awn usually very short, very slender, not twisted. *Lodicules* 2, ovate, hyaline. *Anther-cells* minutely bearded. *Grain* oblong.

Var. *effusa*, lower branches of panicle larger $\frac{1}{2}$–1 in. long. O. effusa, *Hack. ex Herb. Duthie.*—Hazara and Baltistan, alt. 9–10,000 ft., *Duthie*. Karakoram, alt. 10,000 ft., *Clarke*.

2. **O. Munroi,** *Stapf*; tall, stem stout or slender, leaves narrow flat, panicle effuse lower branches long many-fld. towards the ends, spikelets 1–$\frac{1}{4}$ in. ovoid rostrately acuminate, gls. I and II equal, awn of III $\frac{1}{7}$–$\frac{1}{3}$ in. O. divulsa, *Herb. Clarke.* O. kashmirensis, *Hack. ms. ex Herb. Duthie.* Piptatherum soongaricum, *Duthie in Atkins. Gaz. N.W. Ind.* 626 (*name*). P. holciforme, *Herb. Ind. Or. Hf. & T.*

WESTERN HIMALAYA; from Kashmir to Garwhal, alt. 7–11,000 ft. WESTERN TIBET; Ladak, Nubra and Zanskar, alt. 10–13,000 ft.—DISTRIB. Affghan.

Stem 2–4 ft., about as thick as a crow-quill. *Leaves* 4–10 by $\frac{1}{10}$–$\frac{1}{4}$ in., finely acuminate, hardly scaberulous; margins nearly smooth; ligule oblong, hyaline. *Panicle* 6–12 in., branches in distant pairs, filiform, nearly smooth; lower naked for 1–3 in., then branching shortly and bearing shortly pedicelled spikelets. *Spikelets* variable, from ovate to lanceolate; gls. I and II green or tipped with purple or wholly purple; III and its palea pubescent. *Lodicules, stamens* and *grain* as in *lateralis*, but larger.—The larger broader glumes longer awn and great size of the plant distinguish this from var. *effusa* of *lateralis*.

3. **O. æquiglumis,** *Duthie Grass. N.W. Ind.* 27; tall, rather stout, leaves long flat, panicle long effuse or contracted, lower branches long many-fld. towards the ends, spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. ovoid acuminate, gl. I and II equal, awn $\frac{1}{7}$–$\frac{1}{3}$ in. ?O. cœrulescens, *Duthie Grass. N.W. Ind.* 28 (*name*). O. Duthiei, *Hack. ex Herb. Duthie.* Piptatherum æquiglume, *Munro ex Duthie in Atkins. Gaz. N.W. Ind.* 626 (*name*).—Pipt. *n.sp. Herb. Strach. & Wint.* n. 2.

TEMPERATE HIMALAYA; from Kashmir to Sikkim, alt. 6–10,000 ft.

Very closely allied to *O. Munroi*, but usually a stouter plant, and taller, spikelets larger often of a dark or dull green mixed with purple, gls. I and II not so beaked, leaves longer, awn and anthers longer. It may be a state of that plant from moister or warmer localities. I have seen no specimen of *O. cœrulescens*, Duthie, which was collected at Gungotri, alt. 9–10,000 ft.

62. MILIUM, *Linn.*

Annual or perennial grasses. *Leaves* flat. *Spikelets* loosely panicled, not jointed on their pedicels, ovate, dorsally compressed, 1-fld., rachilla not produced. *Glumes* 3, I and II subequal, thin, 3-nerved, persistent; III oblong or obovoid, dorsally compressed, coriaceous, shining, not awned; callus very short, broad, naked; palea 2-nerved. *Lodicules* 2. *Stamens* 3. *Styles* short, free. *Grain* ovoid or oblong, free within the gl. and palea.—Species 5 or 6, N. temp. regions.

M. effusum, *Linn. Sp. Pl.* 61; perennial, panicle effuse, spikelets glabrous. *Fl. Dan.* t. 1143; *Host Gram. Austr.* iii. t. 22; *Engl. Bot.* t. 1106; *Knapp Gram. Britt.* t. 19; *Kunth Enum. Pl.* i. 66, *Suppl.* 44, t. 10, f. 1; *Reichb. Ic. Fl. Germ.* t. 45, vii. t. 73; *T. Nees Gen. Fl. Germ. Monoc.* i. n. 17; *Steud. Syn. Gram.* 34; *Ledeb. Fl. Ross.* iv. 510; *Aitch. Cat. Panjab Pl.* 158; *Duthie Grass. N.W. Ind.* 28. M. ascendens, *Roxb. Hort. Beng.* 8 (*name*). M. dubium, *Jacquem. mss.* Agrostis effusa, *Lamk. Encycl.* i. 159.

WESTERN HIMALAYA, alt. 7–11,000 ft., from Kashmir, *Jacquemont*, &c., to Kumaon, *Strachey & Winterb.*—DISTRIB. N. Temp. and Arctic regions.

Perennial. *Stem* 2–4 ft., erect, smooth, shining, leafy. *Leaves* 6–12 by $\frac{1}{6}$–$\frac{1}{2}$ in. acute, minutely, scaberulous or smooth above; ligule oblong, truncate, torn. *Panicle* 5–10 in., close or effuse; branches capillary, fascicled or subverticillate, naked below, at length spreading or deflexed. *Spikelets* $\frac{1}{6}$ in., green.

DOUBTFUL INDIAN SPECIES.

M. PHLEOIDES, *Sweet, Hort. Brit. Ed.* 2, 555.

63. HELEOCHLOA, *Host.*

Rigid annual or perennial erect or prostrate grasses. *Leaves* flat or convolute. *Spikelets* 1-fld., densely imbricate in cylindric spikes or spiciform panicles, laterally compressed; rachilla not produced above gl. III. *Glumes* 3, hyaline, I and II subequal or I shorter, keeled, 1-nerved, persistent; III = II or longer, lanceolate or oblong, 1-nerved; palea oblong, obtuse or 2-fid, 2-nerved. *Lodicules* 2 (or 0?). *Stamens* 2 or 3. *Styles* elongate. *Grain* ovoid, loose in the gl. and palea.—Species few, Oriental.

Crypsis aculeata, Ait., a grass resembling *Hel. schoenoides* in habit, but with capitate spikelets, is recorded as Indian by Aitchison (*Cat. Panjab. Pl.* 157), Boissier (*Fl. Orient.* v. 475) and other works, but no doubt by mistake for *Heleochloa schoenoides.* I have seen no specimen of *Crypsis*, which is an Eastern and Siberian plant from India, or even from Affghanistan.

1. **H. schoenoides**, *Host Gram. Austr.* i. 23, t. 30; annual, stems compressed prostrate spreading in a circle from the root, panicle ovoid-oblong sessile on the greatly dilated sheath of the uppermost leaf. *Boiss. Fl. Orient.* v. 476; *Duthie Fodd. Grass. N. Ind.* 48. Crypsis aculeata, *Duthie Grass. N.W. Ind.* 25, *Fodd. Grass. N. Ind.* 45, t. 62. C. schoenoides, *Lamk. Illust.* i. 166, t. 42, f. 1; *Kunth Enum. Pl.* i. 22, *Suppl.* 17, t. 5, f. 1; *Ledeb. Fl. Ross.* iv. 459; *Steud. Syn. Gram.* 152; *Duthie Grass. N.W. Ind.* 25. C. compacta, *Steud. l. c.* 151. C. nilaica, *Fresen. & Notar. in Mem. Acad. Tor. Ser.* II. xiv. (1854) 322. C. vaginiflora, *Opiz Natural.* viii. (1824) 83; *Steud. l. c.* 152. Phalaris vaginiflora, *Forsk. Fl. Ægypt. Arab.*

18. Phleum schœnoides, *Linn. Sp. Pl.* 60; *Jacq. Fl. Austr. v. App.* 29 t. 7 *Ic.* i. 2 t. 15; *Cav. Ic.* i. t. 52, f. 5. Spartina phleoides, *Roth. Neue Beytrag.* i. 101. Pechea sub-cylindrica, *Pourr. Chlor. Narbon.* n. 103.

The PANJAB, WESTERN HIMALAYA, and WESTERN TIBET; Kashmir, *Jacquemont.* Iskardo, alt. 7000 ft., *Thomson.* BANDULKUND, *Duthie.* ? SIKKIM; at Dorjiling, *Herb. Griffith.*—DISTRIB. Westward to the Atlantic.

Glaucous. *Stems* many, 1–10 in., prostrate with ascending tips, leafy, rigid. *Leaves* 1–2 in., narrowly lanceolate, acuminate; sheaths deeply furrowed, margins glabrous or ciliate; ligule a short ring of hairs. *Panicle* ½–2 in. by ¼–⅓ in. diam., green. *Spikelets* ⅛ in.; gl. all 1-nerved, keels ciliate; I and II narrowly lanceolate, acuminate; I shortest; III ovate-lanceolate, acuminate; palea oblong, truncate, nerveless. *Lodicules* 2, oblique, cuneate. *Stamens* 2–3, filament very long; anthers small.—The Bandulkund specimens are very small and pale, almost silvery white, with very small spikes hardly emerging from the leaf-sheath. The Sikkim habitat is probably due to a misplaced ticket.

2. **H. dura,** *Boiss. Fl. Orient.* v. 477; perennial, minutely pubescent, stem stout ascending, leaves involute pungent, panicle elongate cylindric narrow. H. alopecuroides, *Duthie Fodd. Grass. N. Ind.* 48 (*non Boiss.*). Crypsis dura, *Boiss. Diagn. Ser.* II. iv. 125. C. phalaroides, *Duthie Grass. N.W. Ind.* 25 (*non M. Bieb.*). Vilfa setulosa, *Trin. in Mem. Acad. Petersb. Ser.* VI. v. ii. (1840) 55; *Steud. Syn. Gram.* 154.

SCIND, *Stocks,* in salt water.—DISTRIB. Arabia.

Whole plant pale, and clothed with a very fine velvety pubescence. *Stems* 6–10 in., densely fastigiate from a woody inclined base which is clothed with leaf-sheaths, ascending, stout, as thick as a crow-quill, hard, few-leaved. *Leaves* 3–6 in., quite terete, rigid, pungent; sheaths short, coriaceous; ligule 0. *Spikes* 2–4 in. by ⅙–¼ in. diam. *Spikelets* 1/12 in., membranous, gl. all 1-nerved and with ciliate keels, I and II narrowly oblanceolate, acuminate; III half as long again, oblong, mucronate; palea oblong, bifid, 2-nerved, lobes obtuse ciliate. *Lodicules* 2, obliquely cuneate, acute. *Stamens* 2; filaments very long; anthers short. *Ovary* ovoid; styles very long, slender.—Boissier cites Griffith by error, for Stocks, under the habitat of Scind.

64. PHLEUM, *Linn.*

Annual or perennial grasses. *Leaves* flat. *Spikelets* 1-fld., with rarely a rudimentary 2, imbricated on cylindric or oblong spiciform panicles, strongly laterally compressed, not jointed on the very short pedicels; rachilla sometimes produced beyond gl. III. *Glumes* 3, I and II equal, keeled, awned or mucronate; III much smaller, hyaline, awned or not, 3–5-nerved, toothed; palea small. *Lodicules* 2. *Stamens* 3. *Ovary* glabrous; styles long. *Grain* compressed, free within the gl. and palea.—Species about 10, temp. and Arctic.

Phleum pratense, Linn. (Timothy grass) is mentioned by Royle (Ill. Bot. Himal. 417, and Duthie Grass. N.W. Ind. 28) as a native of the N.W. Himalaya (Urukta & Chur), but this has never been confirmed.

1. **P. alpinum,** *Linn. Sp. Pl.* 59; perennial, upper sheaths inflated, panicle ovoid or oblong, gl. I and II truncate as long as their awns keels hispid, III 3-nerved. *Fl. Dan.* t. 213; *Host Gram. Austr.* iii. t. 10; *Kunth Enum. Pl.* i. 29; *Trin. Sp. Gram. Ic.* t. 21; *Engl. Bot.* t. 519; *Knapp Gram. Brit.* t. 7; *Reichb. Ic. Fl. Germ.* t. 50; *Ledeb. Fl. Ross.* iv. 458; *Steud. Syn. Gram.* 150; *Boiss. Fl. Orient.* v. 484; *Wall. Cat.* n. 3779; *Duthie Grass. N.W. Ind.* 28. P. Hænkeanum, *Presl Rel. Hænk.* i. 245;

Steud. l. c. 150. P. nigricans, *Willd. ex Trin. in Mem. Acad. Petersb. Ser.* VI. v. II (1840) 123. P. ovatum, *Jacquem. mss.*

Temperate and Subalpine HIMALAYA, alt. 10–13,000 ft., from Kashmir eastwards, in wet places.—DISTRIB. Arctic and Alpine regions. Fuegia.

Stem solitary, 6–18 in., ascending from a creeping base, smooth, stiff. *Leaves* short, spreading; ligule short. *Panicle* $\frac{1}{3}$–$1\frac{1}{2}$ in., green or purplish; gl. I and II $\frac{1}{6}$ in. with the awn.

2. **P. arenarium**, *Linn. Sp. Pl.* 60; annual, upper sheaths inflated, panicle cylindric or oblong narrowed at the base, gl. I and II lanceolate finely acuminate hardly awned keels ciliated above, III very small hairy. *Fl. Dan.* t. 915; *Kunth Enum. Pl.* i. 28; *Reichb. Ic. Fl. Germ.* t. 50; *Ledeb. Fl. Ross.* iv. 456; *Steud. Syn. Gram.* 151; *Boiss. Fl. Orient.* v. 481; *Aitchis. Cat. Panjab Pl.* 158; *Duthie Grass. N.W. Ind.* 28. P. ramosum, *Gilib. Exercit.* ii. 519. Phalaris arenaria, *Willd. Sp. Pl.* i. 328; *Engl. Bot.* t. 222; *Knapp Gram. Britt.* t. 4. Crypsis arenaria, *Desf. Fl. Atlant.* i. 63. Chilochloa arenaria, *Beauv. Agrost.* 37. Achnodon arenarius, *Link Enum. Hort. Berol.* i. 65. Achnodonton arenarium, *Trin. Diss.* i. 166.

The PANJAB and WESTERN HIMALAYA; in Kashmir and Kishtwar, ascending to 9000 ft., *Jacquemont*, &c.—DISTRIB. Westward to the Atlantic.

Stems 6–14 in., tufted, glabrous, leafy. *Leaves* flat, sheaths smooth; ligule elongate, oblong. *Panicle* 1–$2\frac{1}{2}$ by $\frac{1}{3}$–$\frac{2}{3}$ in., glaucous, sometimes lobed. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in., rachilla produced beyond gl. III; gls. I and II punctulate; III 3-nerved.—Var. *Thomsonii*, Griseb. in Goett. Nachr. (1868) 83. I find no character whereby to distinguish this from the common form.

3. **P. asperum,** *Jacq. Collectan.* i. 110, *Ic. Rar.* t. 14; annual, panicle long slender cylindric, gl. I and II cuneately obovate truncate cuspidate, keels scabrid above, III oblong obtuse pubescent. *Vill. Fl. Delph.* ii. 61, t. 2, f. 4; *Kunth Enum. Pl.* i. 28; *Steud. Syn. Gram.* 151; *Boiss. Fl. Orient.* v. 481; *Aitchis. Cat. Panjab Pl.* 158; *Duthie Grass. N.W. Ind.* 28. P. viride, *All. Fl. Pedem.* ii. 232. P. paniculatum, *Huds. Fl. Angl.* 23 (*excl. Syn.*); *Engl. Bot.* t. 1077; *Knapp Gram. Britt.* t. 8. P. ventricosum, *Moench Meth.* 177. P. viride, *All. l.c.* Phalaris aspera, *Retz. Obs.* iv. 14; *Host Gram. Austr.* ii. t. 37. Phal. paniculata, *Ait. Hort. Kew,* i. 87. Chilochloa aspera, *Beauv. Agrost.* 37; *Reichb. Ic. Fl. Germ.* t. 51.

The PANJAB HIMALAYA, *Royle*, &c. KUNAWUR (*Herb. Munro*). KASHMIR, alt. 5–6000 ft., *Jacquemont*, &c. The SALT RANGE, *Aitchison.*—DISTRIB. Westward to the Atlantic.

Stem 6–18 in, tufted, stout, rigid. *Leaves* broad, margins scabrid. *Panicle* 1-$4\frac{1}{2}$ by $\frac{1}{4}$–$\frac{1}{3}$ in. diam. *Spikelets* green, $\frac{1}{12}$–$\frac{1}{8}$ in.; gl. I and II rigid, glabrous or scabrid, the sinus between them rounded, 3-nerved, dilated above with gibbous membranous margins, III membranous = $\frac{2}{3}$ of I and II.—Scent of *Anthoxanthum.*

65. ALOPECURUS, *Linn.*

Annual or perennial grasses. *Leaves* flat. *Spikelets* 1-fld., strongly laterally compressed, imbricating in a cylindric or oblong spiciform panicle, jointed on the tumid tip of the very short pedicels, rachilla not produced beyond gl. III. *Glumes* 3, I and II subequal, strongly compressed, keeled, often connate by their margins below; III as long as I and II, hyaline, convolute, with usually a basal or median dorsal awn; palea 0 (in Indian sp.). *Lodicules* 0. *Stamens* 2 or 3. *Ovary* glabrous. *Grain* laterally compressed, free.—Species about 20, temp. and cold regions.

* *Perennials. Panicle ovoid or oblong.*

1. **A. himalaicus,** *Hook. f.*; upper leaf-sheaths inflated, panicle oblong or subcapitate, spikelets ⅕–¼ in., gls. I and II lanceolate subaristately acuminate hirsute with spreading hairs longer than the spikelet is broad, III much shorter than I and II, awn twice as long as the spikelet or more.

Kashmir and Dras, alt. 10–14,500 ft., *Falconer*, &c.

Stem 6–18 in., subsolitary, erect from a creeping base, rather stout. *Leaves* 3–5 in., erect or spreading, upper shorter lanceolate acuminate; upper sheaths 3–5 in., lower appressed; ligule large, scarious, toothed. *Panicle* 1–1½ in., grey-green or purplish. *Spikelets* membranous, hairs flaccid; gls. I and II connate below, tips dark; III ¼ shorter than I or II, obtuse, apiculate.—Most nearly allied to *A. phalaroides*, Schur, of Hungary, which is hardly distinguishable from *A. brachystachyus*, Bieb., of Siberia; but the spikelets of *A. himalaicus* are much larger than in those species, from which its acuminate gls. I and II and short III at once distinguish it.

2. **A. arundinaceus,** *Poir. Encycl.* viii. 766; rootstock creeping, panicle cylindric, spikelets ⅕ in., gl. I and II connate below acute keel ciliate with long hairs, awn short. *Boiss. Fl. Orient.* v. 487; *Steud. Syn. Gram.* 150. A. altissimus, *Schur in Œstr. Bot. Zeitschr.* ix. (1859) 13. A. elatior, *Jacquem. mss.* A. muticus, *Kar. & Kir. in Bull. Soc. Nat. Mosc.* xv. (1842) 527; *Steud. l.c.* 148. A. nigrescens, *Jacq. Eclog. Gram.* ii. t. 13. A. nigricans, *Hornem. Hort. Hafn.* i. 68; *Kunth Enum. Pl.* i. 24. A. pratensis, *Aitchis. Cat. Panjab Pl.* 158; *Duthie Grass. N.W. Ind.* 26, *Fodd. Grass. N. Ind.* 46 (*non Linn.*). A. pratensis, *var.* ruthenicus, *Trin. Sp. Gram. Ic.* t. 45. A. repens, *Bieb. Fl. Taur. Cauc.* iii. 54. A. ruthenicus, *Weinm. in Fl. Dan.* t. 2881. A. sibiricus, *Hort. Vind. ex Roem. & Sch. Syst.* ii. 271. A. ventricosus, *Pers. Syn.* i. 80.

Western Himalaya, alt. 8–12,000 ft., from Kashmir to Garwhal.—Distrib. Westward to Europe, N. Asia.

Stem 2–4 ft., erect, slender. *Leaves* 6–10 in., acuminate; upper sheaths slightly inflated, 4–6 in. long; ligule rounded. *Panicle* 1–3 in. by ¼–⅓ in. diam., green, soft. *Spikelets* subsilky; gl. I and II lanceolate, acuminate, more or less connate at the base or to above it; III acute, tip scaberulous; awn subbasal.—I doubt this being more than a form of *A. pratensis*, L.

** *Annuals or subperennials. Panicle cylindric.*

3. **A. aristulatus,** *Michx. Fl. Bor. Am.* i. 43; stems slender geniculately ascending, leaves glaucous, panicle slender, spikelets $\frac{1}{12}$–$\frac{1}{10}$ in. oblong, gls. I and II hyaline obtuse softly ciliate, III truncate, awn median-dorsal short, anthers oblong bright yellow. A. fulvus, *Sm. Engl. Bot.* t. 1467; *Fl. Dan.* t. 1804; *Kunth Enum. Pl.* i. 24; *Reichb. Ic. Fl. Germ.* t. 49; *Ledeb. Fl. Ross.* iv. 464; *Boiss. Fl. Orient.* v. 487; *Steud. Syn. Gram.* 407. A. geniculatus, *Poll. Hist. Pl. Pal.* n. 66; *Host Gram. Austr.* ii. t. 32 (*non Linn.*). A. paludosus, *Beauv. ex Mert. & Koch. Fl. Germ.* i. 481. A. subaristatus, *Pursh. Fl. Am. Sept.* i. 66.

Western Himalaya; Kashmir, in marshes, alt. 6–14,000 ft., *Clarke*, *Duthie*.—Distrib. Europe, N. Asia, N. America.

Stem 6–18 in., creeping below, flaccid. *Leaves* 4–8 in., linear, flat; upper sheaths somewhat inflated; ligule elongate. *Panicle* 1–2 in. by ⅙–¼ in. diam., green. *Gls.* I and II free or connate at the very base, elliptic, obtuse.—Regarded by various authors as a variety of *A. geniculatus*, L.

4. **A. geniculatus,** *Linn. Sp. Pl.* 60; stems erect or geniculate below, leaves not glaucous, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. oblong, gls. I and II connate at or above the base subacute or obtuse hyaline ciliate, III truncate, awn subbasal, anthers linear orange-yellow. *Engl. Bot.* t. 1250; *Knapp Gram. Brit.* t. 18; *Kunth Enum. Pl.* i. 24, *Suppl.* 18, t. 7, f. 1; *Trin. Sp. Gram. Ic.* t. 42; *Steud. Syn. Gram.* 147; *Aitchis. Cat. Panjab Pl.* 157; *Duthie Grass. N.W. Ind.* 25, *Fodd. Grass. N. Ind.* 46; *Benth. Fl. Hongk.* 408, *Fl. Austral.* vii. 555. A. australis, *Nees in Hook. Journ. Bot.* ii. (1843) 412; *Steud. l. c.* 148. ? A. diandrus, *Griff. Notul.* iii. 11, *Ic. Pl. Asiat.* t. 142, f. 2. A. paniceus, *O. Muell. in Fl. Dan.* t. 861. A. ramosus, *Poir. Encycl.* viii. 776; *Steud. l. c.* 146.—Alopecurus, *Wall. Cat.* n. 3780 C.

Temperate and Subtropical HIMALAYA, alt. 3–7000 ft., from Kashmir to Bhotan. ? Assam, *Griffith.*—DISTRIB. Most temp. regions.

Stems 6–18 in., stout or slender. *Leaves* $\frac{1}{8}$–$\frac{1}{6}$ in. broad; upper sheaths more or less inflated; ligule oblong. *Panicle* 1–3 in. by $\frac{1}{4}$–$\frac{1}{3}$ in. diam., greenish-yellow. *Spikelets* larger than in *A. aristulatus*, not so membranous; gl. III with the truncate tip sub-erose. *Stamens* 2 or 3.—Of Griffith's *A. diandrus*, there are under the same number (Kew distrib. 2693) slender narrow-leaved specimens from Rydang in Bhotan, quite like the western Indian plant, but also a much larger one from the sandy banks of the Burrampooter in Assam, with many stout stems from the root, much broader leaves, with more ventricose upper sheaths, and rather stouter panicles (it is n. 6463 Kew distrib.). Griffith, in his Itinerary Notes (158, n. 801, and Notulæ l. c.), says the stems and young sheaths are glaucous, and he figures the anthers as oblong and yellow, which are characters of *aristulatus*; but the habit and spikes are those of *geniculatus*. It may prove to be a distinct species.

5. **A. agrestis,** *Linn. Sp. Pl. Ed.* II. 89; stem erect or geniculate below, spikelets $\frac{1}{5}$ in. gl. I. and II. connate to or below the middle obtuse, keels narrowly winged, III narrowly oblong tip truncate, awn subbasal twice as long as the spikelet recurved. *Fl. Dan.* t. 697; *Host Gram. Austr.* iii. t. 12; *Engl. Bot.* t. 848; *Knapp Gram. Brit.* t. 16; *Kunth Enum. Pl.* i. 23; *Trin. Sp. Gram. Ic.* t. 37; *Reichb. Ic. Fl. Germ.* t. 19; *Ledeb. Fl. Ross.* iv. 465; *Steud. Syn. Gram.* 149; *Boiss. Fl. Orient.* v. 485; *Duthie Grass. N.W. Ind.* 25, *Fodd. Grass. N. Ind.* 46; *Benth. Fl. Hongk.* 407, *Fl. Austral.* vii. 555. A. myosuroides, *Huds. Fl. Angl.* 23.

Temperate and Subtropical HIMALAYA; Kashmir, &c. The PANJAB. KHASIA HILLS, alt. 3000 ft., *Clarke.* MUNNEPORE, alt. 3000 ft., *Watt.*—DISTRIB. Europe. W. and N. Asia. Introd. elsewhere.

Stem 6–10 in., or more. *Leaves* scaberulous, upper sheaths slightly inflated; ligule oblong. *Panicle* 1–3 in. by $\frac{1}{6}$–$\frac{1}{5}$ in. diam., pale green. *Spikelets* loosely imbricate, rather narrow, glabrous except the keels of gl. I and II; gl. III narrowly oblong, truncate, tip toothed; awn rather stout. *Anthers* long, narrow.—Possibly not indigenous in India. Watt describes it as found in rice-fields in Munnepore.

6. **A. nepalensis,** *Trin. ex Steud. Syn. Gram.* 148; stem erect or geniculately ascending, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. obovate, gl. I and II connate to the middle subacute keels narrowly winged scabrid, III narrowly oblong, tip truncate exserted, awn subbasal very short or 0.—A. navicularis, *Ham. ex Wall. Cat.* n. 3780 A.—Alopecurus, *Wall. Cat. l. c.* A. B.

UPPER GANGETIC PLAIN; Oude, *Hamilton.* The PANJAB; Lahore, *Thomson;* Garwhal, *Jacquemont.*

Perhaps only a form of *A. agrestis*, which it closely resembles, but the spikelets are much smaller and very closely imbricate, less contracted at the base, and the keel of the glume is not ciliate. *Stamens* 3, anthers long.

66. **PHIPPSIA**, *Br.*

Very small perennial grasses. *Leaves* narrow. *Spikelets* minute, laterally compressed, in sparingly branched subspiciform panicles, not jointed on their pedicels; rachilla not produced beyond gl. III. *Glumes* 3, membranous, all persistent, I and II very short, obtuse, nerveless; III terminating the stipitiform rachilla, oblong, obtuse or tip rounded, nerves 0 or 1–3; palea as long or longer than the gl., tip 2-fid, nerves very faint. *Lodicules* 2, hyaline. *Stamens* 1–3. *Styles* very short, free, plumose to the base. *Grain* oblong, loose.—Species 2, an Arctic and the following.

This genus should perhaps be placed near to *Colpodium*.

P. himalaica, *Hook. f.*; palea much longer than its gl.

ALPINE WESTERN HIMALAYA; Kumaon, Barji-Khang Pass, alt. 14,500 ft., *Strachey & Winterbottom*; Garwhal, on the Duder Glacier, alt. 13–14,000 ft., *Duthie*.

Densely tufted, 6–8 in. high, very slender. *Leaves* 2–4 by $\frac{1}{16}$ in., linear, obtuse; ligule long. *Panicle* 1-1½ in., sometimes almost reduced to a spike; rachis slender, smooth; branches very few, short, erect and appressed to the rachis, bearing 2–3 spikelets. *Spikelets* $\frac{1}{10}$ in. long, pale brown; gl. I shortest, ovate, obtuse; II almost orbicular, concave, = about ¼ III, nerveless, tip rounded; III raised on a short cylindric naked rachilla, concave, obtuse, nerveless, sparsely hairy on the back towards the base; palea longer than the gl. and nearly as broad, concave, tip 2-fid, keels ciliate. *Lodicules* 2, ovate-lanceolate. *Stamen* 1, filament very long; anther nearly as large as gl. III. *Ovary* narrow; stigmas broadly plumose.—Differs from the Arctic *P. algida*, in the much narrower leaves, in the fewer very shortly pedicelled larger spikelets not crowded on lateral branches, in the narrower gl. III, long palea, very large anther, broadly plumose stigmas, and long ligule.

67. **CYATHOPUS**, *Stapf.*

A slender perennial grass. *Leaves* flat. *Spikelets* 1-fld., very small, subterete, singly pedicelled on the branches of a decompound narrow panicle, articulate on the cupular tip of the pedicel, rachilla not produced beyond the flg. gl. *Glumes* 3, I and II subequal, oblong, beaked, persistent, strongly 3-nerved; III rather shorter, membranous, obtuse, 5-nerved below the middle; palea lanceolate, acute, keels smooth. *Lodicules* 2, ovate-lanceolate. *Stamens* 3, anthers short. *Styles* distinct, stigmas short.

C. sikkimensis, *Stapf in Hook. Ic. Pl.* t. 2395. Hymenachne, n. 3. *Herb. Ind. Or. Hf. & T.* Milium Treutleri, *Kuntze Rev. Gen. Pl.* 780 (*in part*).

SIKKIM HIMALAYA; Lachoong Valley, alt. 7–10,000 ft., *J. D. H.*

Stem 2–3 ft. high, from a creeping stoloniferous base. *Leaves* 6–10 by $\frac{1}{8}$–¼ in., finely acuminate, many-nerved, scaberulous, margins thickened smooth; sheaths deeply striate; ligule elongate, scarious. *Panicle* 8–12 in., oblong, or pyramidal; rachis and branches flexuous, terete, scaberulous; branches fascicled or subverticillate, lower 2–4 in. long, naked below. *Spikelets* $\frac{1}{12}$–$\frac{1}{10}$ in., scaberulous, shortly pedicelled, pale green; gls. I and II stoutly subaristately beaked, scaberulous; nerves scabrid; III oblong, nerves slender; callus obconical; palea linear-oblong, 2-nerved. *Anthers* and stigmas short.—Munro regarded this very distinct grass as forming a new genus near the *Hymenachne* section of *Panicum*. Dr. Stapf has, I think, rightly referred it to near *Garnotia*.

67^{1}. **WOODROWIA,** *Stapf.*

(Genus not in *Clavis*, p. 7.)

Annual. *Leaves* narrow, flat. *Spikelets* 2–5, 1-fld., subdigitately panicled at the top of a slender peduncle, articulate on a fragile rachis, laterally compressed, rachilla not produced beyond the flg. gl. *Glumes* 3, I and II strongly laterally compressed, empty, acute, dorsally rounded and there sometimes much thickened, 1-nerved, I $\frac{1}{3}$ longer than II; III = II, hyaline, 1-nerved, 2-lobed with a slender interposed geniculate awn; palea obovate-oblong, hyaline. *Lodicules* 2, cuneate, lobulate. *Stamens* 2, anthers linear. *Styles* free and stigmas very slender. *Grain* slender, cylindric, free within the gls.

W. diandra, *Stapf in Hook. Ic. Pl.* t. 2447.

The DECCAN; Poonah District, *Woodrow.*

Stem 12–18 in., slender, branched, nodes hairy. *Leaves* 3–4 by $\frac{1}{12}$–$\frac{1}{6}$ in., acuminate, hirsute, margins scabrid; sheaths appressed, glabrous or hairy at the mouth; ligule short, ciliolate. *Spikes* 1–2 in., rachis slender, hairy. *Spikelets* rather distant, $\frac{1}{4}$ in. long, green or blueish; gl. I dorsally hairy, margins ciliolate; keel of II densely ciliate; awn of III 1 in., column shorter than the upper part, spirally ciliate.—This interesting plant arrived at Kew after the printing of the key, p. 7.

68. **GARNOTIA,** *Brongn.*

Erect, perennial rarely annual grasses. *Leaves* flat or convolute. *Spikelets* very small, 1-fld., panicled, solitary or geminate, jointed on the pedicels, narrowly-lanceolate; rachilla not produced beyond the fl. gl. *Glumes* 3, I and II empty, subequal, 3-nerved, acuminate, equalling or longer than III, awned or not; III bisexual, 1–3-nerved, triandrous, very narrow, terete, tip acuminate or notched, awned, rarely awnless or 3-awned; awn straight or base twisted, rarely geniculate or recurved; sides of palea auricled at the base. *Lodicules* 2. *Styles* free. *Grain* linear or oblong, free.—Species about 20, Asiatic and Polynesian.

In the disposition and description of the species I have been aided by Dr. Stapf, who has drawn up an account of the whole genus.

A. *Stems* densely tufted, uppermost internode exceeding the rest of the stem. *Leaves* long, stiff, erect, not articulate on the sheath; basal sheaths equitant, flattened.

* Leaves narrow, complicate (triangular on section); margins of lower sheaths woolly, at length glabrate.

† *Awn of gl. III reflexed from the twisted base.*

1. **G. Thwaitesii,** *Stapf. mss.*; stem very tall stout, panicle 1–2 ft. much branched, branches long slender, spikelets $\frac{1}{8}$–$\frac{1}{5}$ in. base shortly hairy, gl. I and II acuminate or shortly awned. G. scoparia, *Thwaites Enum. Pl. Zeyl.* 363; *Trim. Cat. Ceyl. Pl.* 106. Berghausia scoparia, *Munro ex Thw. l. c.*

CEYLON; hotter parts of the island, *Thwaites.*

Stem 2–4 ft. and more, often as thick as a goose-quill below, compressed. *Leaves* 1–3 ft., about $\frac{1}{6}$ in. broad, wiry; lower sheaths strongly compressed and keeled, margins above woolly; ligule very short, ciliate. *Panicle* very variable in length and breadth, copiously effuse. *Gl.* I and II entire or notched with a short awn in the notch; III tip notched or entire, awn rarely twice as long as its gl.—Steudel refers Koenig's *Agrostis scoparia* to *Arundinella nervosa*, Nees. A specimen so named in Rottler's Herbarium is a grass 10 ft. high with flat leaves $\frac{2}{3}$ in. broad and panicle $2\frac{1}{2}$ ft. long, the spikelets have all fallen away. It is probably *Thysanolæna.*

†† *Awn not reflexed from the twisted base, bent above,* 0 *in G. tectorum.*

2. **G. Schmidii,** *Hook. f.*; stem 1–3 ft. simple or branched above, leaves very narrow flexuous, panicle 6–10 in. narrow, spikelets $\frac{1}{5}$ in. pale or dark brown, base bearded, glumes I and II notched and awned, III nearly as long as I notched, awn twice as long as the glume.

NILGHIRI HILLS, *Schmid;* Gondaloor Ghat, alt. 4500 ft., *Lawson.*

Stems tufted, base with the distichous leaf-sheaths an inch broad. *Leaves* $\frac{1}{12}$ in. broad, shorter than the peduncle. *Panicle* erect, branches $1–1\frac{1}{2}$ in., erect.—Schmid's specimens are small, 1 ft. high with a rather loose panicle and almost red-brown spikelets. Lawson's is a very much larger plant with longer leaves and denser panicle and paler spikelets.

3. **G. tenuiglumis,** *Stapf. mss.*; stem tall stout, leaves very narrow, panicle 2 ft. very narrow, spikelets $\frac{1}{8}$ in., base nearly glabrous, glumes thin, II 1-nerved, awn of III short capillary base twice or thrice twisted. Chrysopogon muricatus, *Herb. Wight,* n. 3247.

WESTERN PENINSULA, *Wight.*

Stem 3–4 ft., as stout as a goose-quill, solid, upper internode 10–16 in. *Leaves* 12–16 in., exceeding the stem, glabrous except towards the very base; sheaths subcompressed, margins above woolly; ligule a ridge of hairs. *Panicle* strict, rachis stout, terete; branches 2–3 in., filiform, in distant clusters, strict, erect. *Spikelets* pale yellow-brown, appressed to the branchlets; gl. I aristulate; II subhyaline; awn of III rather longer than the spikelets.

4. **G. scoparia,** *Stapf. mss.*; stem 3 ft., leaves very narrow plicate or keeled, panicle 16–20 in. long narrow branches very long, spikelets $\frac{1}{6}$ in. base shortly bearded, glumes firm, II 3-nerved, awn of III about as long as the spikelet, base twisted. Berghausia scoparia, *Munro in Herb. Ind. Or. H.f. & T.* B. elata, *Arn. ex Miq. Analect. Bot.* ii. 20. Miquelia elata, *Arn. ex Nees in Wight Cat.* n. 2600, *ex Miq. l.c.* Agrostis scoparia, *Koen.* et Aristida arundinacea, *ex Wall. Cat. n.* 8912 A. A. laxa et Aristida montana, *Herb. Rottl. ex Wall.* 8912 B.—Gramin. *Wall. Cat.* n. 8912.

MYSORE; at Chitaldrug, *Heyne*; Mysore & Kurg, *G. Thomson.*

Stem nearly as thick as a goose-quill below. *Leaves* erect, very narrow, glabrous or margins towards the base hairy; sheath with woolly margins; ligule a ridge of hairs. *Panicle* very narrow, branches 6–8 in., filiform, erect. *Spikelets* pale yellow; gl. I and II subsimilar, I subaristately acuminate, III 2-dentate, awn geniculate.

5. **G. tectorum,** *Hook. f.*; stem very tall stout, leaves long $\frac{1}{2}$ in. broad, panicle 1–2 ft. narrowly oblong branches lax-fld. at length spreading, spikelets $\frac{1}{6}$ in. base obscurely pubescent, gl. all subequal acuminate or mucronate not awned. G. stricta, *Thw. Enum. Pl. Zeyl.* 363 (*excl. Syn.*); *Trim. Cat. Ceyl. Pl.* 106. Berghausia mutica, *Munro in Proc. Amer. Acad.* iv. (1864) 362.

CEYLON; in elevated parts of the Island, *Gardner,* &c.

Stem 3–4 ft., as thick as a goose-quill below, strict. *Leaves* 2 ft., linear, acute, base plicate, more or less hairy; sheath hirsute above or glabrous; ligule very short, truncate, ciliate. *Panicle* 8–18 in.; rachis stout, strict; branches slender, rigid. *Spikelets* rather few and distant, geminate, lower subsessile, upper on capillary pedicels.

B. Leaves scattered, linear or very narrowly lanceolate, flaccid, articulate on the sheath.

6. **G. polypogonoides,** *Munro ex Oliver in Hook. Ic. Pl.* t. 1481; stem 6–12 in. slender, leaves $\frac{1}{10}$–$\frac{1}{4}$ in. broad lanceolate from a narrow base, panicle contracted flexuous, spikelets $\frac{1}{8}$ in. base bearded, gl. I and II entire one or both long-awned, III 3-awned. G. polygonoides, *Duthie Grass. N.W. Ind.* 12. Berghausia Emodi, *Endl. ex Miq. Analect. Bot.* II. 20. Miquelia Emodi, *Arn. & Nees in Nov. Act. Nat. Cur.* xix. *Suppl.* I. (1843) 179; *Steud. Syn. Gram.* 119.—*Gen. Nov. Wall. Cat.* n. 8884.

TEMPERATE HIMALAYA; from Garwhal to Sikkim, alt. 6–9000 ft.

Stem tufted, rarely branched, about as thick as a crow-quill. *Leaves* 4–6 by $\frac{1}{12}$–$\frac{1}{4}$ in., hirsute towards the base; sheath with glabrous or pubescent margins; ligule very short, fimbriate. *Panicle* 2–5 in.; branches subscaberulous. *Spikelets* green or brown; gl. I narrowly lanceolate, 3-nerved; II broader; III dark brown, 2 lateral nerves excurrent as minute bristles, median awn many times longer than its gl., base twisted.

7. **G. stricta,** *Brongn. in Duperr. Voy. Bot.* 132, t. 21; stems 2–3 ft. tufted, leaves $\frac{1}{10}$–$\frac{1}{2}$ in. broad, lower lanceolate from a narrow base, panicle 2–10 in. very narrow, branches in distant fascicles, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in. base sparsely hairy, gl. I and II finely acuminate or II notched below the awn, III entire or notched awned or not, awn shorter or longer than its gl. G. ascendens & Griffithii, *Munro in Cat. Pl. Griff. Helf. &c. ined.* G. augustata, *Hack. mss.* G. sandvicensis, *Hillebr. Fl. Hawaii,* 513. ? Berghausia pallens & B. tenella, *Arn. ex Miquel Analect.* II. *Bot.* 21, 22. B. ascendens, *Munro mss.* Andropogon adscendens, *Heyne ex Wall. Cat.* n. 8906. —Chrysopogon ?, *Wall. Cat.* n. 8789. —Tripogon ?, *Wall. l. c.* n. 8891. —Gramin. *Wall. l. c.* n. 8906. —Aira, *Griff. Notul.* iii. 56, *Ic. Pl. Asiat.* t. 145.—*Herb. Wight,* n. 3243, 3244.

SUBTROPICAL and TEMPERATE HIMALAYA, from Garwhal to Mishmi and BURMA, alt. 4–9000 ft. KHASIA HILLS, alt. 4–6000 ft. BEHAR; on Parusnath, *Clarke.* CHOTA NAGPORE and WESTERN GHATS, from the Concan southward, *Wight,* &c. (*Kew distrib.* 6780, 6781, 6787).—DISTRIB. Sandwich Islds.

Annual? *Stem* usually geniculate and branched at the base, rarely thicker than a crow-quill, stiff, nodes glabrous or pubescent. *Leaves* 6–10 in., lanceolate or linear-lanceolate, flat or margins involute, glabrous or hirsute or scabrid above; sheath glabrous or hirsute above; ligule short, truncate. *Panicle* strict or flaccid, branches scaberulous. *Spikelets* pale; gl. I and II 3-nerved, median nerve sometimes excurrent, III 1-nerved or nerveless, median awn $\frac{1}{2}$ in. or less.—Probably *G. patula,* Munro, of China and Tonkin, which has densely tufted leaves, is this species.

Var. *khasiana,* Stapf; stout, 3 ft. high, leaves sometimes nearly 1 in. broad, panicle a foot long.

Var. *breviaristata,* Stapf; gl. I and II not awned.

8. **G. arundinacea,** *Hook. f.*; stem branched, leaves lanceolate from a rounded or subcordate base flat acuminate, panicle 4–6 in. nodding, branches fastigiate capillary, spikelets $\frac{1}{12}$–$\frac{1}{8}$ in., gl. I and II notched and awned, awn of III twice as long as its gl. Andropogon arundinaceus *Heyne in Herb. Rottler.*

NILGHIRI HILLS, alt. 2–6000 ft., *Heyne,* &c.

Stem reedy, as thick as a pigeon's quill, branches ascending. *Leaves* 2–3 in. by

¾ in. broad at the base; sheath villous at the top; ligule very short, pubescent. *Panicle* flexuous, branches and capillary pedicels scaberulous. *Spikelets* pale, base sparsely hairy; awns variable in length, median very slender, not twisted.

9. **G. Fergussonii,** *Trim. in Journ. Bot.* xxvii. (1889) 170; stem 1–3 ft., leaves linear densely bearded at the base, panicle 4–6 in. oblong, branches at length spreading, spikelets often in dimorphic pairs, upper ⅛–⅕ in. base obscurely bearded, gl. I and II entire awned or not, III entire or tip 2-fid, awn twisted at the base at length deflexed. G. patula, *Thw. mss.* (C.P. 3947); *Trim. Cat. Ceyl. Pl.* 106. Andropogon Beckettii, *Thw. mss.*

CEYLON; Matale district, *Beckett*; Knuckle's Mts., alt. 5–6000 ft., *Fergusson.*

Stems smooth, branched. *Leaves* 4–8 by ⅕–¼ in., and sheath glabrous or sparsely hairy; ligule short, truncate. *Panicle* pale green or purplish, branches smooth. *Spikelets* in pairs, the upper often reduced to a glume; gl. I and II oblong-lanceolate, awn short or 0; III with a single awn about ⅕ in. long.

10. **G. courtallensis,** *Thwaites Enum. Pl. Zeyl.* 363; stem 8–18 in. slender, leaves linear not densely bearded at the very narrow base, panicle 1–3 in. lax, branches at length spreading, spikelets sometimes in dimorphic pairs ⅛ in. base obscurely hairy, gl. I and II lanceolate awnless or mucronate, III entire or tip notched, awn geniculate twisted below the knee. *Trim. Cat. Ceyl. Pl.* 106. Miquelia courtallensis, *Arn. ex Nees in Nov. Act. Nat. Cur.* xix. *Suppl.* i. (1843) 179; *Steud. Syn. Gram.* 119. Berghausia courtallensis, *Nees ex Miq. Analect. Bot.* II. 20.—*Wight Herb.* n. 2376.

NILGHIRI and TRAVANCORE HILLS, *Wight*, &c., alt. 6000 ft., *Lawson.* CEYLON; Adam's Peak, alt. 4000 ft., *Gardner*, &c.

Stems simple or branched. *Leaves* rarely 3 in. long, lanceolate, acuminate, spreading, membranous, more or less hairy, as are the sheaths; ligule very short. *Panicle* pale; branches smooth or slightly scaberulous. *Spikelets* few, shortly pedicelled; gl. I and II broader than usual in the genus, I thin, 3-nerved.—Batratherum, *Wall. Cat.* n. 8827, *Andropogon minutissimus*, Herb. Heyne, referred here by Steudel, is a totally different plant (see p. 147).

11. **G. micrantha,** *Thwaites Enum. Pl. Zeyl.* 363; stem 1–3 ft. branched and often creeping below, leaves linear-lanceolate from a narrow base, panicle 2–10 in. contracted lax-fld., branches capillary, spikelets 1/12–1/10 in. subsolitary, gl. I and II acuminate, III shortly awned or mucronate. *Trim. Cat. Ceyl. Pl.* 106.

CEYLON; Central Province, alt. 2–4000 ft., *Thwaites* (C.P. 945).

Stems elongate, branched, tufted and ascending, or creeping below. *Leaves* 4–6 by ⅓–¾ in., sparsely hairy beneath; sheath glabrous except at the tip; ligule very short, truncate. *Panicle* pale green, at first contracted; branches scaberulous, at length spreading. *Spikelets* obscurely hairy at the base; awn about ⅕ in., strict, not twisted.

Var. *nana,* Stapf; stem short very slender, panicle 1½–2 in., gl. III not awned Berghausia mutica, *var.* nana, *Munro mss.* Ceylon (C.P. 944).

12. **G. fuscata,** *Thwaites Enum. Pl. Zeyl.* 363; stems short tufted and creeping, base leafy, leaves short linear, panicle narrow few-fld., spikelets ⅕ in. base shortly bearded, gl. I and II with setaceous tips, III with a long awn compressed and once twisted at the base. *Trim. Cat. Ceyl. Pl.* 106.

CEYLON; Saffragam district, alt. 4000 ft., *Thwaites.*

Stem 1–4 in., compressed and leafy at the base; branches ending in a slender peduncle a foot long or less with one or two subulate leaves. *Leaves* chiefly radical, 1 by $\frac{1}{5}$ in., rather thick in texture, lanceolate, acute, flat, smooth, margins smooth thickened, cauline convolute; sheath very short, compressed, mouth bearded; ligule truncate. *Gl.* I and II strongly 3-nerved.—The specimens are insufficient for a satisfactory description. The species is quite unlike any other.

69. **POLYPOGON,** *Desf.*

Annual or perennial grasses. *Leaves* flat. *Spikelets* 1-fld., minute, jointed (but persistent) on their pedicels, laterally compressed, keeled, densely crowded on the short branches of a spiciform or lobed panicle; rachilla not produced beyond gl. III. *Glumes* 3; I and II equal, concave, keeled, 2-fid notched or entire, with a slender awn below the tip or in the sinus; III much-smaller, hyaline, sessile, truncate, toothed, awned or not; palea small, 2-nerved. *Lodicules* 2, falcate. *Stamens* 1–3, anthers small. *Ovary* glabrous; styles free. *Grain* obovoid, free within the gl. and palea.—Species few, natives of all warm regions.

1. **P. monspeliensis,** *Desf. Fl. Atlant.* i. 66; annual, panicle spiciform oblong or cylindric, gl. I and II oblong scaberulous ciliolate tip obtuse or notched, awn from the sinus or beneath it as long to many times as long as the gl., III 2-toothed shortly awned. *Beauv. Agrost.* 17, t. vi. f. 8; *Mutel Fl. Fr.* t. 76, 77; *Kunth Enum. Pl.* i. 232, *Suppl.* 181, t. xiii. f. 7; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 32; *Reichb. Ic. Fl. Germ.* t. 31; *Ledeb. Fl. Ross.* iv. 443; *Steud. Syn. Gram.* 184; *Boiss. Fl. Orient.* v. 520; *Benth. Fl. Austral.* v. 546; *Doell in Mart. Fl. Bras.* II. iii. 44, t. 126; *Thw. Enum. Pl. Zeyl.* 370, 444; *Trim. Cat. Ceyl. Pl.* 108; *Aitchis. Cat. Panjab. Pl.* 165; *Duthie Grass. N.W. Ind.* 30, *Fodd. Grass. N. Ind.* 50. P. cruentus, *Duthie l. c.* (error for *crinitus*). P. maritimus, *Duthie l. c.* (*not Willd.*). P. nepalensis, *Nees ex Steud. Nom. Ed.* II. ii. 378, *Syn. Gram. l. c.*; *Trin. in Mem. Acad. Petersb. Ser.* VI. iv. ii. (1845) 255; *Duthie l. c.* 30. P. fugax, *Nees ex Steud. l. c.*; *Duthie Fodd. Grass. N. Ind.* 51. P. paniceus, *Lag. Gen. & Sp. Nov.* 3. P. polysetus, *Steud. in Flora*, xii. (1829) 467. P. zeylanicus, *Nees ex Steud. Syn. Gram.* 182. Agrostis alopecuroides, *Lamk. Illustr.* 812. A. crinita, *Mœnch Meth.* 178. A. panicea, *Willd. Sp. Pl.* i. 128; *Engl. Bot.* t. 1704; *Moon, Cat. Pl. Ceyl.* 8. A.? Rora, *Herb. Ham. ex Wall. Cat.* n. 3777 B. A. triaristata, *Knapp Gram. Britt.* t. 23. Cynosurus paniceus, *Linn. Sp. Pl.* 73. Phleum crinitum, *Schreb. Gram.* i. 151, t. 20, f. 3; *Sm. Fl. Græc.* i. 46, t. 22; *Roxb. Fl. Ind.* i. 313. P. monspeliense, *Koel. Descr. Gram.* 57. Alopecurus aristatus, *Gouan Hort. Monsp.* 37; *Huds. Fl. Angl.* 28. Al. monspeliensis, *Linn. Sp. Pl.* 61. Al. paniceus, *Linn. l. c. Ed.* ii. 90. Phalaris cristata, *Forsk. Fl. Æg. Arab.* 17.—Agrostis, *Wall. Cat.* n. 3777.

Throughout CONTINENTAL INDIA (not seen from Burma and the E. Peninsula). WESTERN TIBET, ascending to 9000 ft., and CEYLON.—DISTRIB. Trop. and Temp. regions.

Stems tufted, 6 in.–2 ft., stout or slender, leafy, base, geniculate, filiform and erect in starved states from Tibet, with very small spikes and very short awns. *Leaves* 3–6 by $\frac{1}{8}$–$\frac{1}{4}$ in., green, ligule oblong. *Panicle* $\frac{1}{2}$–6 in. long, $\frac{1}{4}$–1 in. broad, pale yellowish-green, silky, sometimes lobulate. *Spikelets* $\frac{1}{20}$–$\frac{1}{12}$ in., very shortly pedicelled. *Gl.* I and II very variable in breadth, obovate-oblong, sides scaberulous, keels scabrid, margins ciliate, tip entire notched or very shortly 2-fid; awns from the length of the gl. to $\frac{1}{3}$ in. long, excessively delicate; III very small, oblong, glabrous, 2-fid, awned or not; palea oblong, tip notched. *Anthers* very minute, short. *Ovary* ovoid.—The starved Tibetan specimens are the *P. fugax*, Nees, they pass insensibly into the larger form. I have not found *P. maritimus* from any part of India. It may be distinguished by the deeply cleft gl. I and II.

2. **P. littoralis,** *Sm. Compend. Fl. Brit.* 13, *Engl. Bot.* t. 1251; annual or perennial, panicle lobed, gl. I and II subentire or notched, awn twice as long as the gl. or less, III awned or not. *Kunth Enum. Pl.* i. 233; *Reichb. Ic. Fl. Germ.* t. 31, vii. t. 75; *Steud. Syn. Gram.* 184; *Benth. Fl. Hongk.* 427; *Boiss. Fl. Orient.* v. 521; *Duthie Grass. N. W. Ind.* 30. P. elongatum, *Lagasc. Gen. & Sp. Nov.* 3 (*non Kunth*). P. Lagascæ, *Roem. & Sch. Syst.* ii. 226; *Trin. Diss.* 1, 170. P. demissus, *Steud l. c.* Agrostis littoralis, *Knapp. Gram. Britt.* t. 22. A. lutosa, *Poir. Encycl. Suppl.* i. 249; *Roem. & Sch. l. c.* i. 358. Santia elongata, *Parlat. in Webb. Phyt. Canar. Sect.* iii. 393.

TEMPERATE HIMALAYA, alt. 4–10,000 ft., from Kashmir to Bhotan and Munnepore. WESTERN TIBET; Iskardo, *Thomson.*—DISTRIB. Temp. and subtrop. regions.

Except by the uniformly shorter awns of the spikelets and usually broader lobed panicle, I find it very difficult to distinguish the annual form of this species from the common one of *P. monspeliensis*. In India *P. littoralis* does not descend to the plains, nor does it in the hills assume the filiform starved state of *P. monspeliensis*. In Europe it is always described as perennial, and as usually a littoral plant with a creeping root. The following forms occur in India.

P. littoralis proper; perennial, stem decumbent creeping and rooting below.

Var. *Higegaweri*; annual, stems tufted ascending. P. Higegaweri, *Steud. Syn. Gram.* 422; *Griseb in Goett. Nachr.* (1868) 82.

Var. *muticus*; perennial, stems creeping and rooting, gls. I and II apiculate, III awnless.—Kunawur, *Thomson.*

70. SPHÆROCARYUM, *Nees.*

A dwarf annual. *Stem* creeping and ascending, leafy throughout. *Leaves* ovate-cordate, acute, amplexicaul. *Spikelets* 1-fld., very minute, ovoid, pedicelled on the close-set capillary branches of a pyramidal panicle which is sessile in the axil of the uppermost leaf, jointed on the pedicels; rachilla jointed at the base, not produced beyond gl. III. *Glumes* 3, cymbiform; I and II glabrous, hyaline; I nerveless; II longest, 1-nerved; III hirsute, 1-nerved; palea as long as the gl., oblong, obtuse, keels distant. *Lodicules* 2, very minute. *Stamens* 3, anthers linear. *Ovary* narrowly ellipsoid; styles short, free. *Grain* ovoid, free, pericarp adherent to the seed.

S. elegans, *Nees ex Steud. Nom. Ed.* II. ii. 620. Sphærocarpum elegans, *Nees ex Steud. l. c.* 256. Grayia elegans, *Nees in Wight Cat.* n. 2033; *Steud. Syn. Gram.* 119. G. zeylanica, *Arn. ex Steud. Nom. Ed.* II. i. 705. Isachne pulchella, *Roth. Nov. Sp.* 58; *Kunth Enum. Pl.* i. 136; *Thw. Enum. Pl. Zeyl.* 362; *Trim. Cat. Ceyl. Pl.* 104; *Benth. Fl. Hongk.* 414. Panicum elegans, *Wight & Arn. ex Steud. Nom. Ed.* II. ii. 256. P. malaccense, *Trin. Gram. Panic.* 204; *Nees Agrost. Bras.* 212; *Kunth l. c.* 113; *Miq. Fl. Ind. Bat.* iii. 457. P. pulchellum, *Spreng. Syst.* i. 322. Agrostis malaccensis, *Koen. ex Heyne in Herb. Rottl.* Andropogon Grayia, *Steud. Nom. l. c.* i. 91.—Panicum, *Wall. Cat.* n. 8736.

Silhet and the Khasia Hills, in marshes, *Wallich*, &c. Mergui, *Griffith.* Singapore, *Ridley.* Ceylon, *Macrae*, &c.—Distrib. China.

Stem 6–12 in., as thick as a sparrow's quill, prostrate and rooting below, then erect, rarely branched, nodes bearded. *Leaves* all alike in size and form, $\frac{1}{3}$–$\frac{1}{4}$ in. long, acute or acuminate, ciliate-serrulate, subcoriaceous, ecostate, nerves very close-set; sheaths much shorter than the internodes, glabrous or hirsute; ligule of close-set white hairs. *Panicle* 1–1$\frac{1}{2}$ in., solitary and terminal, with very rarely 1–2 lower on the stem; peduncle very short; concealed in the leaf-sheath; rachis rather stout; branches very many, opposite and alternate, capillary, spreading. *Spikelets* $\frac{1}{40}$–$\frac{1}{30}$ in.—This is undoubtedly Roth's *Isachne pulchella.* The habit is that of *Panicum ovalifolium*, Poir, with the leaf-nervation of an *Isachne.* It differs from *Agrostis* in habit, and in the spikelets jointed on the pedicels (as in *Paniceæ*); and from *Sporobolus* in habit, foliage, and the adnate pericarp of the grain.

71. SPOROBOLUS, *Br.*

Perennial, rarely annual grasses. *Leaves* flat or convolute. *Spikelets* small or minute, 1-rarely 2-fld., in effuse or close or spiciform panicles, jointed on their pedicels, awnless; rachilla very short, jointed at the base, not produced beyond the flg. gl. *Glumes* 3, nerveless or 1–3-nerved, membranous; I and II unequal, persistent or singly caducous; III longer or shorter than I or II, 1-nerved; palea often splitting between the 2 very close nerves. *Lodicules* very minute or 0. *Stamens* 2–3, anthers short. *Styles* short, free. *Grain* loose within the gl. and palea, pericarp or its epidermis loose, deciduous, rarely adherent.—Species about 80, chiefly tropical.

* Glumes I and II both much shorter than III.

1. **S. diander,** *Beauv. Agrost.* 25; panicle narrowly pyramidal, branches capillary in scattered fascicles, spikelets $\frac{1}{20}$–$\frac{1}{18}$ in., gl. I and II hyaline truncate nerveless, grain oblong or obovoid-oblong. *Jacq. Eclog. Gram.* t. 28; *Link Enum. Hort. Reg. Berol.* i. 87; *Kunth Enum. Pl.* i. 213; *Wall. Cat.* n. 3765; *Griff. Notul.* iii. 46, *Ic. Pl. Asiat.* t. 139, f. 85; *Dalz. & Gibs. Bomb. Fl.* 296; *Thw. Enum. Pl. Zeyl.* 370; *Trim. Cat. Ceyl. Pl.* 108; *Aitchis. Cat. Panjab Pl.* 165; *Duthie Grass. N.W. Ind.* 29, *Fodd. Grass. N. Ind.* 40, t. 63; *Miquel Fl. Ind. Bat.* iii. 375; *Benth. Fl. Austral.* vii. 622. Vilfa diandra, *Wight Cat.* n. 1744 (*non Trin.*). V. erosa, *Trin. in Mem. Acad. Petersb. Ser.* vi. *Sc. Nat.* v. II. (1840) 86; *Steud. l. c.* 159. V. Retzii, *Steud. Nom. Ed.* II. ii. 768, *Syn. Gram.* 162. Agrostis contracta, *Herb. Heyne ex Wall. Cat.* n. 3766 A. A. diandra, *Retz. Obs.* v. 19; *Roxb. Fl. Ind.* i. 317. Panicum secundum, *Herb. Heyne ex Wall. l. c.* —Sporobolus, *Wall. Cat.* 3766, 3768.—Sporobolus, *Griff. l. c.* 44, *Ic.* t. 149, f. 2.

Throughout India and Burma, ascending the Himalaya to 5500 ft. Ceylon.—Distrib. Asia and Austral. trop.

Stems 1–3 ft., slender. *Leaves* densely tufted, 3–10 in., very narrow, flat or convolute, margins entire; ligule a few hairs. *Panicle* 4–10 in., rachis very slender, sometimes capillary, strict; branches $\frac{1}{4}$–1 in., sometimes flowerless at the base. *Spikelets* sessile or very shortly pedicelled; gl. I and II not half as long as III, broadly truncate and usually erose; III obtuse or subacute, obscurely 1-nerved. *Stamens* 2–3. *Grain* subtruncate, pericarp rather adherent.

2. **S. indicus,** *Br. Prodr.* 170; stem stout, panicle very narrow branches short appressed covered to the base with crowded spikelets $\frac{1}{18}$–$\frac{1}{12}$

in. long, gl. I and II obtuse hyaline 1-nerved, III opaque, grain broadly obovoid. *Link Hort. Reg. Berol.* i. 87; *Kunth Enum. Pl.* i. 211; *Thw. Enum. Pl. Zeyl.* 370; *Trim. Cat. Ceyl. Pl.* 108; *Duthie Fodd. Grass. N. Ind.* 49; *Benth. Fl. Hongk.* 426, *Fl. Austral.* vii. 622; *Griseb. Fl. Brit. W. Ind.* 533. S. angustus, *Buckl. in Proc. Acad. Sc. Philad.* (1862) 88. S. elongatus, *Br. Prodr.* 170; *Hook. Handb. N. Zeal. Fl.* 327; *Miq. Fl. Ind. Bat.* iii. 376; *Duthie Grass. N. W. Ind.* 29. S. Lamarckii, *Desv. in Ham. Prodr. Fl. Ind. Occ.* 4. S. minor, *Kunth Enum. Pl.* i. 212. S. tenacissimus, *Beauv. Agrost.* 26; *Kunth l. c.* 212, *Suppl.* 167; *T. Nees Gen. Fl. Germ. Monoc.* i. n. 28; *Duthie Fodd. Grass. N. Ind.* 49. Vilfa capensis & elongata, *Beauv. Agrost.* 16; *Trin. Gram. Diss.* i. 154; *Steud. Syn. Gram.* 159. V. exilis, *Trin. in Mem. Acad. Petersb. Ser.* vi. *Sc. Nat.* v. II. (1840) 89; *Steud. l. c.* 159. V. indica, *Trin. ex Steud. Nom. Ed.* II. ii. 767, *Syn. Gram.* 162; *Baker Fl. Maurit.* 449. V. tenacissima, *H. B. & K. Nov. Gen. & Sp.* i. 138; *Nees Agrost. Bras.* 393; *Trin. Sp. Gram. Ic.* t. 60; *Steud. l. c.* 160. P. rupestris, *Trin. Diss.* ii. 22; *Steud. l. c.* 161. Agrostis elongata, *Lamk. Illustr.* i. 142. A. fertilis, *Steud. l. c.* 170. A. indica, *Linn. Sp. Pl.* 63. A. tenacissima, *Jacq. Collect.* i. 85, *Ic. Rar.* 3, t. 16 (*excl. Syn.*). A. tenuissima, *Spreng. Syst.* i. 258.—Sporobolus, *Wall. Cat.* n. 3766, B, 3767.

Throughout INDIA, ascending the Himalaya to 5000 ft., BURMA and CEYLON.—DISTRIB. All warm countries.

Stem 2–3 ft., sometimes as thick as a small goose-quill at the base. *Leaves* 8–24 in., convolute or flat, rarely ⅓ in. diam., margins smooth; ligule a few hairs. *Panicle* 6–18 in., often interrupted; rachis stout, erect, or curved; branches erect, ½ in. or longer, often whorled, densely clothed usually to or to near the base with green spikelets, which are erect and imbricate. *Spikelets* larger than in *S. diander*. Gl. I = about ⅓ III; II not twice as long; III acute. *Pericarp* adherent.—It is not always easy to distinguish this from *S. diander*, which is much the most common in India. In its normal state *indicus* is a far more robust plant, with a stout rachis and branches of the panicle, larger and more herbaceous more crowded spikelets, and a broader grain; but both vary greatly in the panicle.

3. **S. minutiflorus,** *Link Enum. Hort. Berol.* i. 88; tall, slender, leaves long, panicle very large effuse supra-decompound, branches capillary, spikelets $\frac{1}{30}$ in., gl. I minute subquadrate, II = ½ III orbicular-ovate obtuse, grain broadly obovoid. *Kunth Enum. Pl.* i. 214. Vilfa capillaris, *Wight & Arn. ex Wight Cat.* n. 2036 (*non Miq*). V. minutiflora, *Trin. Diss.* i. 158; *Steud. Syn. Gram.* 158. V. mangalorica, *Hochst. ex Miq. Analect. Bot.* ii. 24; *Steud. l. c.* 159. V. tenuissima, *Schult. Mant.* ii. 479. Panicum tenuiflorum, *Hort. Monac. ex Link. l. c.* P. tenuissimum, *Mart. ex Schrank in Denkschr. Bot. Ges. Regensb.* ii. (1822) 26.

The DECCAN PENINSULA, *Wight*. CANARA, *Hohenacker*.

Stem 2–3 ft. *Leaves* narrow, flat, finely acuminate, margins quite smooth; ligule of minute hairs. *Panicle* 12–18 in., erect; rachis quite smooth, very slender; branches innumerable, 1–2 in., spreading, and branchlets excessively slender, flowering at the tips. *Spikelets* ellipsoid, dark colrd.; gl. I truncate; II broadly ovate, obtuse, nerveless; III ovate-oblong, obtuse, nerveless; palea shorter, broad, truncate. *Stamens* 2.

4. **S. Wallichii,** *Munro mss.*; very tall, erect, leaves long, panicle tall oblong or subpyramidal decompound branches capillary, branchlets divaricate few-fld., spikelets $\frac{1}{10}$ in., gl. I minute truncate, II = ½ III or

longer ovate acuminate, grain broadly obliquely obcordate. Sporobolus, *Wall. Cat.* n. 3769 A.

BEHAR; Rajmahal Hills, *Wallich.* PEGU, *Kurz.* CEYLON; between Trincomalee and Kantalla, *Ferguson.*

Perennial? *Stem* 3–4 ft., as thick as a crow-quill, strict, sparingly leafy. *Leaves* 1–2 ft. by $\frac{1}{6}$–$\frac{1}{4}$ in., quite smooth; upper sheaths very long; ligule 0. *Panicle* 12–18 in. by 4–5 broad, branches opposite and whorled, branchlets flowering towards the tips. *Spikelets* pale brown; gls. II and III faintly 1-nerved; palea oblong, truncate, as long as its gl. *Stamens* 3.—Habit of *S. minutiflorus*, but spikelets very different.

5. **S. ioclados,** *Nees Fl. Afr. Austral.* 161; leaves short, panicle oblong or subpyramidal effuse, branches capillary, spikelets $\frac{1}{16}$–$\frac{1}{12}$ in. scattered, gl. I lanceolate $= \frac{1}{3}$ III, II $= \frac{2}{3}$ III oblong-lanceolate obtuse, grain linear-oblong truncate. Vilfa ioclados, *Nees ex Trin. in Mem. Acad. Petersb. Ser.* VI. *Sc. Nat.* v. II. (1840) 65.

SCIND, *Stocks.*—DISTRIB. S. Africa.

Stems 10–18 in., densely tufted, rather stout. *Leaves* 2–3 in., narrow, densely tufted, sheath short; ligule obscure. *Panicle* 3–7 in., branches opposite and alternate, spreading. *Spikelets* oblong, pale.—A very elegant grass.

** Glume I as long as III or nearly so. Panicle contracted.

6. **S. virginicus,** *Kunth Revis. Gram.* i. 67, *Enum. Pl.* i. 210, *Suppl.* 167; stems erect from a decumbent woody creeping base, leaves strict distichous convolute pungent, panicle elongate narrow interrupted branches very short, spikelets $\frac{1}{10}$–$\frac{1}{12}$ in. subsessile crowded, gls. I and II oblong-lanceolate acute, I shorter than II, grain broadly obovoid. *Trim. Cat. Ceyl. Pl.* 108; *Benth Fl. Austral.* vii. 621; *Griseb. Fl. Brit. W. Ind.* 533. S. littoralis, *Kunth l. l. c. c.* 68, 213. Vilfa barbata, *Beauv. Agrost.* 16. V. littoralis, *Beauv. l. c.*; *Steud. Syn. Gram.* 162. V. murina, *Sieb. ex Steud. l. c.* 157. V. orientalis, *Wight Cat.* n. 1745 (*in part*). V. virginica, *Beauv. l. c.*; *Trin. Diss.* i. 155; *Sp. Gram. Ic.* t. 48; *Steud. l. c.* 157; *Baker Fl. Maurit.* 449. Agrostis barbata, *Pers. Syn.* i. 75. A. littoralis, *Lamk. Illustr.* 161. A. pungens, *Pursh Fl. Am. Sept.* 64. A. virginica, *Linn. Sp. Pl.* 63; *Labill. Pl. Nov. Holl.* i. 20, t. 23. Podosemum virginicum, *Link Enum. Hort. Berol.* i. 85. Calotheca sabulosa, *Steud. in Flora*, xii. (1829), II. 488. Crypsis maritima, *Munro ex Macowan in Cape Monthly Mag. N.S.* iii. (1871), *Suppl.* 7.

CEYLON; common on the shores, *Heyne? Trimen.*—DISTRIB. Westwd. to tropical Africa and America; eastwd. to Australia.

Perennial. *Stem* as thick as a duck's quill, branched, hard and often tortuous at the base, then erect or ascending 6–10 in. high. *Leaves* close-set, erecto-patent, 1-3 in. long or more, narrow and almost terete from the involute margins, very pale, glabrous or scaberulous above, striate; sheaths terete, short or long; ligule of long soft hairs. *Panicle* 1–4 in., subspiciform, very pale, narrow but more or less interrupted. *Spikelets* very shortly pedicelled; gls. all 1-nerved, keels glabrous or obscurely scabrid towards the tip; palea oblong, narrowly truncate. *Grain* with the pericarp loosened if moistened.—Trinius' figure represents gl. I as shorter than in the Ceylon specimens and others that I have examined. It is remarkable that this grass should have no certain habitat on the shores of continental India. There is a specimen from Heyne in Rottler's herbarium, marked "Nawülus, 21st Aug., 1794," a word which sounds more Cingalese than Indian. There is another in *Wight's herbarium*, where *S. orientalis*, *spicatus*, *tremulus* and *virginicus* are all fastened on the same sheet as No. 1745. *S. pungens*, Kunth, of the Mediterranean region, from Spain to Egypt and Arabia, is a slight variety with a stouter dense panicle, which Dr. Stapf and I have independently sought in vain to distinguish by any other character, and this is of the slightest.

7. **S. glaucifolius,** *Hochst. in Flora,* xxv. (1842) I. *Bieb.* 123; slender, glaucous, leaves short strict narrow flat or undulate glaucous not pungent, panicle elongate contracted white, branches very short erect, spikelets $\frac{1}{16}$ in. subsessile crowded, gls. I and II subequal ovate-lanceolate acuminate as long as III or rather longer. Vilfa glaucifolia, *Steud. Syn. Gram.* 154. V. scabrifolia, *Hochst. ex Edgew. in Journ. Linn. Soc.* vi. (1862) 196; *Aitchis. Cat. Panjab Pl.* 165. Agrostis barbata, *β*, senegalensis, *Pers. Syn.* i. 76. A. littoralis *β, Lamk. Illustr.* 161; *Poir. Encycl. Suppl.* i. 251.

The PANJAB. Dehra Ismael Khan, *Duthie*; Multan, *Edgeworth.* SCIND, *Stocks.* —DISTRIB. Afr. trop.

Perennial; stems 12–18 in., densely tufted. *Leaves* 2–5 by $\frac{1}{10}$–$\frac{1}{8}$ in., narrowed from the cordate base to the finely acuminate tip, margins smooth, somewhat hairy towards the base; ligule a ridge of minute hairs. *Panicle* 3–5 in., interrupted, very pale yellowish. *Spikelets* very shortly pedicelled; gls. all 1-nerved; I and II hyaline, puncticulate; I rather shorter and narrower than II.—Of the synonymy cited above that of *V. littoralis β*, and the two sp. of *Agrostis* are taken from J. Gay's mss. on a Senegal specimen in Herb. Kew. Of *V. scabrifolia* I know nothing, nor where Edgeworth gets the name (which is not in the "Kew Index," but from his citing Stock's number (667) as the same plant, there is no doubt that *S. glaucifolius* is that meant. Edgeworth (l.c. 182) mentions this amongst other plants of which the seeds are swept up for food by the poorer classes of the desert.

*** Glume I shorter than II and III.

† *Panicle contracted. Perennials, except S. piliferus.*

8. **S. tremulus,** *Kunth Revis. Gram.* i. 67, *Enum. Pl.* i. 210, *Suppl.* 166; stoloniferous, leaves short subulate or filiform flat or convolute pungent margins smooth, spikelets $\frac{1}{16}$ in., gl. I shorter than III lanceolate, II as long as III or longer, grain oblong. S. geniculatus, *Nees ex Aitchis. Cat. Panjab Pl.* 165. S. orientalis, *Trim. Cat. Ceyl. Pl.* 108 (*non Kth.*). Vilfa geniculata, *Nees ex Steud. Syn. Gram.* 156; *Herb. Wight* n. 3307. V. orientalis, *Wight Cat.* n. 1745 (*in part*). V. tremula, *Trin. Diss.* i. 155; *Steud. l. c.* 160. Agrostis juncea, *Lamk. Encycl.* i. 60, *Illustr.* t. 41, f. 2. A. Phuldubbha, *Herb. Ham. ex Wall. Cat.* n. 3770. A. tenacissima, *Roxb. Fl. Ind.* i. 316 (*excl. Syn.*). A. tremula, *Willd. Sp. Pl.* i. 372 (*excl. Syn*). Zoysia? tremula, *Beauv. Agrost.* 148.—Sporobolus, *Wall. Cat.* n. 3770, 3771.

Plains of INDIA, from the Panjab to Bengal and southwd. PEGU, *Kurz.* CEYLON, *Trimen.*—DISTRIB. Tonkin, Cambodia.

Stems 2–6 in., many from a hard knotted stoloniferous stock, erect or prostrate, wiry; stolons 6–18 in., stout or slender, leafy, flexuous. *Leaves* $\frac{1}{2}$–2 in., rigid, narrowed from the usually hairy base to the tip; ligule a few hairs. *Panicle* 1–4 in., subspiciform, sometimes longer flexuous and interrupted, branches short rarely a few spreading; pedicels short. *Spikelets* crowded, subpersistent on the very short pedicels, very pale; glumes all 1-nerved; palea as long as its gl. *Stamens* 3.—A very common and variable pasture grass. *Vilfa geniculata* is a large state from Madras, with almost woody stems 12–18 in. long and flat leaves.

9. **S. spicatus,** *Kunth Revis. Gram.* i. 67, *Enum. Pl.* i. 210; stoloniferous, leaves short rigid, panicle slender cylindric, spikelets $\frac{1}{16}$ in.,

gl. I minute, II lanceolate acute, grain obliquely oblong. *Boiss. Fl. Orient.* v. 512. S. orientalis, *Herb. Wight* n. 3303, 3304, *Cat.* n. 1745 (*in part*). Vilfa spicata, *Beauv. Agrost.* 16; *Trin. Diss.* 1, 152, *Sp. Gram. Ic.* t. 12; *Steud. Syn. Gram.* 160. ?Agrostis involuta, *Poir. Encycl. Suppl.* i. 252. A. spicata, *Vahl Symb.* i. 9; *Del. Fl. Ægypt.* 20, t. 10, f. 1. A. virginica, *Forsk. Fl. Æg. Arab.* 20 (*ex Kunth*).—Sporobolus, *Wall. Cat.* n. 3773.

The Deccan Peninsula, *Heyne*; Palamcottah, *Wight*.—Distrib. Arabia, Egypt, trop. Africa.

Stem 6–12 in., from a hard stoloniferous rootstock, stiff, strict above the geniculate base. *Leaves* 1–2 in., divaricate, pungent, scabrid above; ligule 0. *Panicle* spiciform, 2–3 in. by $\frac{1}{10}$–$\frac{1}{8}$ in. diam. *Spikelets* sessile, persistent on the branchlets, pale. *Glumes* hyaline, I rounded; II 1-nerved; III ovate-lanceolate; palea as long as the gl. *Grain* obliquely oblong or orbicular-oblong.—*Agrostis involuta*, Poir., referred here by Sprengel, is a Marocco plant, which may be *S. virginicus* or *pungens*.

10. **S. orientalis,** *Kunth Enum. Pl.* i. 211; stoloniferous, leaves pungent, margins serrulate, panicle narrowly oblong, spikelets $\frac{1}{14}$–$\frac{1}{12}$ in., subsessile, gl. I = ¼ III or shorter tip rounded, II = III or longer obtuse, grain obovoid. *Dalz. & Gibs. Bomb. Fl.* 295. S. humifusus, *Trim. Cat. Ceyl. Pl.* 108 (*non Kunth*). Vilfa diandra, *Trin. Diss.* i. 154 (*excl. Syn. Retz.*). V. orientalis, *Nees ex Trin. in Mem. Acad. Petersb. Ser.* vi. *Sc. Nat.* v. II. (1840), 65; *Wight Cat.* n. 1745 (*in part*); *Steud. Syn. Gram.* 156. Agrostis elongata, *Roth. Nov. Sp.* 41. A. orientalis, *Nees Agrost. Bras.* 393 (*excl. Syn. Roxb.*). A. pungens, *Herb. Heyne ex Wall. Cat.* n. 3772. A. tenacissima, *Linn. f. Suppl.* 107 (*excl. Syn. Jacq.*).—Sporobolus, *Wall. l. c.*

The Deccan Peninsula, *Heyne, Wight*. Ceylon, at Calpentyn, *Trimen*.

Stem 6–18 in., base stout, hard, branching, branches and flowering stems usually geniculate below. *Leaves* very variable, 1–6 in., suberect or spreading, more or less pungent, glabrous or hairy above; ligule 0. *Panicle* 1½–4 in., erect, subspiciform or more open with here and there short horizontally spreading branches that are naked below, usually pale. *Spikelets* closely packed; gl. I nerveless, II and III 1-nerved.—The Ceylon and Heyne's specimens are 12–18 in. high with long flat leaves and narrow open panicles, Wight's are shorter and stouter with spiciform panicles, and closely resemble states of *S. tremulus*, from which the short obtuse gl. I at once distinguishes it. Although in Herb. Wight Prop. the four species mentioned in the notes to *S. virginicus* are all included under No. 1745, *S. orientalis*, the latter alone bears that number in Herb. Hook. and Herb. Benth.

11. **S. piliferus,** *Kunth Enum. Pl.* i. 211 (var. *a*); annual, leaves hairy serrulate, panicle linear branches very short erect, spikelets $\frac{1}{20}$–$\frac{1}{16}$ in., gl. I ½–⅔ III lanceolate, II longer than III oblong-lanceolate, III oblong, grain oblong compressed. S. ciliatus, *Munro in Herb. Ind. Or. Hf. & T.*; *Duthie Grass. N.W. Ind.* 29 (*non* Vilfa ciliata, *Presl.*). Vilfa pilifera, *Trin. Diss.* i. 157, ii. 23, *Sp. Gram. Ic.* t. 58. Triachyrum nilagiricum, *Steud. in Hohen. Pl. Ind. Or.* n. 931.—Sporobolus, *Wall. Cat.* n. 3774.

Western Himalaya; from Kashmir to Nepal, alt. 3–8000 ft., *Wallich*, &c. The Khasia Hills, alt. 5000 ft. Mysore, at Belgaum, *Ritchie*. Nilghiri Hills, *Wight*, &c. Malacca, *Hervey*.

Stems 3–12 in., densely tufted, erect, roots fibrous. *Leaves* 1–4 in., chiefly radical, narrowed from the base to the tip, flat or convolute, sparsely hairy above and at the mouth of the sheath, margins serrulate below or nearly to the tip; ligule 0. *Panicle* 1–3 in., strict, erect, dense-fld., often interrupted. *Spikelets* brown; gl. I nerveless; II and III 1-nerved, callus minute; palea oblong. *Stamens* 2, anthers very short.—Trinius figures this plant from a Brazilian and a Nepalese specimen.

The latter from Wallich is a very dwarf form, which is not uncommon in the Himalaya. The Brasilian is Kunth's *β. major*, is a much larger specimen, and may or may not be specifically the same. *S. ciliatus*, Presl, to which *S. piliferus* was referred by Munro, is a Panama plant, and is, I think, from the description different.

†† *Panicle open, effuse.*

12. **S. arabicus,** *Boiss. Diagn. Pl. Or. Ser.* I. xiii. 47; perennial, stems many from a woody stoloniferous base, leaves rigid narrow, panicle pyramidal, spikelets $\frac{1}{15}$ in. crowded subsessile at the ends of the branches, gl. I minute ovate, II ovate-oblong acute as long as III. S. pallidus, *Boiss. Fl. Orient.* v. 514 (*non Lindl.*); *Aitch. Cat. Panjab Pl.* 165 (*excl. Syn.*) ?*Duthie Grass. N.W. Ind.* 29, *Fodd. Grass. N. Ind.* 50. Vilfa pallida, *Nees ex Trin. in Mem. Acad. Petersb. Ser.* VI. *Sc. Nat.* v. ii. (1840) 62; *Steud. Syn. Gram.* 155. V. arabica, *Steud. l. c.* 241.

PANJAB PLAINS; *Royle*, &c. WAZURISTAN, ascending to 7000 ft., *Stewart.* ROHILKUND, *Duthie.* SCIND, *Stocks.*—DISTRIB. Arabia, Beluchistan.

Woody base of the stem sometimes as thick as the middle finger, sending out rigid often geniculate stolons, and stout or slender flowering branches 6–24 in. high. *Leaves* 1–10 in. by $\frac{1}{8}$–$\frac{1}{6}$ in., narrowed from the rounded base to the tip, flat or convolute, scaberulous above, finely ciliate-serrulate; ligule 0. *Panicle* 2–6 in. long, branches whorled, capillary, naked below. *Spikelets* subspicate on the branchlets, oblong, pale; gl. II and III obtuse, 1-nerved; palea as long as its gl. *Grain* subglobose.—The synonymy of this plant is perplexing, owing to the double use of the specific name *pallidus*, and to the fact of *Vilfa* being now regarded as a synonym of *Sporobolus*. This name (*pallidus*) was applied by Nees in 1840 to the Arabian plant described above, under *Vilfa*; and by Lindley in 1848 to a very different Australian one, under *Sporobolus*. Bentham (*Fl. Austral.* vii. 623) assuming that Nees had referred his plant to *Sporobolus*, renamed Lindley's *S. Lindleyi*. Lastly, Boissier, when he founded his *S. arabicus*, was not aware that it was Trinius's *Vilfa pallida*, which he erroneously cites in Fl. Orient., under *Sporobolus pallidus*, Trin. In this case the proper course appears to me to be to retain the name *Sp. pallidus*, Lindl., for the Australian plant, and *Sp. arabicus*, Boiss., for the Arabian and Indian.

13. **S. pulchellus,** *Br. Prodr.* 170; annual, slender, leaves narrowly lanceolate flat spinulosely serrulate, panicle oblong, branches whorled capillary few-fld. towards the tips, spikelets $\frac{1}{20}$ in. shortly pedicelled, gl. I = $\frac{1}{2}$ II obtuse, keels of both ciliate, II = III broadly ovate acuminate. *Kunth Revis. Gram.* ii. 106, t. 123, *Enum. Pl.* i. 215, *Suppl.* 171; *Benth. Fl. Austral.* vii. 623. S. capillaris, *Arn. ex Miq. Ann. Bot. Ind.* II. 25 (non *Vilfa capillaris*, Wt. & Arn.). Vilfa pulchella, *Trin. Diss.* i. 160. Agrostis pulchella, *Roth. Nov. Sp.* 41. Panicum montanum, *Ham. ex Wall. Cat.* n. 8883.—Sporobolus, *Wall. l. c.*

BEHAR, *Wallich, Thomson.* CHOTA NAGPORE, *Clarke.*—DISTRIB. Australia.

Stem 6 in.–2 ft., filiform or capillary, strict, erect from the base or nearly so, distantly leafy. *Leaves* 2–5 in., gradually narrowed from the rounded base to the finely acuminate tip, margins with tubercle-based cilia below; ligule 0. *Panicle* 2–6 in., loose, whorls of many branches at regular intervals. *Spikelets* reddish-brown? glumes almost hyaline, obtuse. *Grain* globose; pericarp loose, hyaline.—Bentham observes that Kunth's figure is of an unusually narrow-leaved form with the remarkable cilia not represented.

14. **S. coromandelianus,** *Kunth Revis. Gram.* i. 681, *Enum. Pl.* i. 213; annual, leaves lanceolate flat spinulosely serrulate, panicle pyramidal branches whorled capillary, spikelets $\frac{1}{20}$ in., gl. I minute

oblong or lanceolate, II = III both ovate-lanceolate acuminate. *Dalz. & Gibs. Bomb. Fl.* 296; *Trim. Cat. Ceyl. Pl.* 208; *Wall. Cat.* n. 3764. S. commutatus, *Kunth Enum.* i. 214; *Miq. Fl. Ind. Bat.* iii. 376 (*excl. Syn. pulchellus*); *Boiss. Fl. Orient.* v. 513; *Aitch. Cat. Panjab Pl.* 165; *Duthie Grass. N.W. Ind.* 29. S. discosporus, *Nees Fl. Afr. Austr.* 158. Vilfa commutata, *Trin. Diss.* i. 156; *Wight Cat.* n. 1743. V. coromandeliana, *Beauv. Agrost.* 15; *Trin. Sp. Gram. Ic.* t. 11 (*gl. I omitted*); *Steud. Syn. Gram.* 153. V. discospora, *Trin. in Mem. Acad. Petersb. Ser.* VI. *Sc. Nat.* ii. (1841) 59. V. Roxburghii, *Nees ex Trin. l. c.* V. Roxburghiana, *Nees ex Wight Cat.* n. 1742; *Steud. Nom. Ed.* II. ii. 59. Triachyrum cordofanum, *Hochst. ex Steud. Syn. Gram.* 176. T. discosporum, *Steud. l. c.* Agrostis coromandeliana, *Retz. Obs.* iv. 19; *Vahl Symb.* i. 10; *Roxb. Fl. Ind.* i. 316. A. indica, *Forsk. Fl. Æg. Arab.* 104. A. Rura, *Hb. Ham. ex Wall. l. c.* B.

Plains of INDIA, from the Punjab eastward to Burma, and southward to CEYLON.—DISTRIB. Affghan. N. and S. Africa. (Texas and Mexico, introd. ?).

Stems many, 4–12 in., spreading from the root, leafy. *Leaves* 1–3 by ⅙–⅓ in., narrowed from the subcordate base to the finely acuminate tip, spinulosely toothed especially towards the base; mouth of sheath villous. *Panicle* very large for the size of the plant, 2–6 by 1–4 in., branches 4–6 in subsecund whorls, ½–2 in. long, branchlets drooping 1–2-fld. *Spikelets* subglobose; glumes hyaline, all 1-nerved or I nerveless. *Stamens* 2, anthers very short. *Grain* obliquely oblong or subglobose.—Nees Fl. Afr. Austr. refers *Agrostis pulchella*, Roth., to *Sp. commutatus*, as var. β. *Trinianus*, Arn. et Nees Glum. Ind. Or. ined., with panicle ovate and gl. I 5–6 times shorter than *commutatus*.

Var. *Collettii*; panicle narrowly pyramidal or conical 2–3 in. long by 1–1¼ in. across the lower branches, spikelets bright red-brown.—Shan Hills, *Collett.*

DOUBTFUL SPECIES.

Vilfa rigidifolia, *Trin. in Mem. Acad. Petersb. Ser.* vi. *Sc. Nat.* v. II. (1840) 80.—E. Indies, *Herb. Thouars.*—Described by Trinius as having spikelets 2 (French) lines long, which is twice as long as any Indian species known to me.

72. AGROSTIS, *Linn.*

Perennial, rarely annual grasses. *Leaves* usually flat. *Spikelets* small, 1-fld., in effuse or contracted panicles with capillary whorled branches, not jointed on their pedicels; rachilla not produced beyond gl. III. *Glumes* 3, I and II equal or unequal (sub-awned in *A. subaristata*), keeled, 1- rarely 3-nerved; III membranous, 5-nerved, truncate, glabrous, awn dorsal or 0, callus glabrous or with few minute hairs; palea nearly as long as its gl. or shorter or 0, 2-nerved or nerveless. *Lodicules* 2. *Stamens* 3, anthers long or short. *Grain* free within the gl.—Species about 100, chiefly in N. temp. regions.

The genera *Agrostis*, *Calamagrostis*, and *Deyeuxia* are, as all authors agree, separated by artificial characters and are not well limited by these. It therefore becomes a question of expediency how to limit them, and the addition of many hitherto undescribed Himalayan species has not tended to aid this operation. Many authors make of *Deyeuxia* a section of *Calamagrostis*. Bentham keeps them distinct, but confines *Calamagrostis* to species with gl. I and II longer than III. After much study, I conclude that for taxonomic purposes, the most practical arrangement is to confine *Agrostis* to species with no elongation of the rachilla, and a naked or almost naked callus of gl. III (a character appreciated by most authors); to refer to *Calamagrostis* those with a villous callus but with no elongation of the rachilla, and to *Deyeuxia*, those with both a villous callus and the rachilla elongate beyond gl. III and (with a few exceptions) penicillate. I know of no species of *Agrostis* with the last-mentioned character of *Deyeuxia*, but there are species of *Agrostis* with longer hairs than normal in the callus, and of *Calamagrostis* with shorter hairs than normal; there are also species of the latter genus with a minute elongation of the rachilla, and of *Deyeuxia* in which that organ is short. There is no Indian *Agrostis* except *A. myriantha* with the tall coarse habit of several species of *Calamagrostis* and *Deyeuxia*, but many species of these two genera have the slender habit of *Agrostis*, and can only be distinguished from it by the minute characters given above. The species of *Calamagrostis* with the gl. III hairy all over form a peculiar section, well limited by this character; their habit is altogether that of *Agrostis*.

* Palea half as long as gl. III or longer, rarely minute.

1. **A. alba,** *Linn. Sp. Pl.* 63; ligule oblong, flowering panicle spreading fruiting contracted, branches nearly smooth, spikelets $\frac{1}{12}$ in., gl. I and II subequal acute, III about $\frac{1}{4}$ shorter rarely awned, tip truncate crenate, callus quite glabrous. *Kunth Enum. Pl.* i. 219, *Suppl.* 175; *Boiss. Fl. Orient.* v. 514; *Schrad. Fl. Germ.* t. 2; *Fl. Dan.* x. t. 1623; *Engl. Bot.* t. 1189; T. *Nees Gen. Fl. Germ. Monoc.* i. n. 29; *Reichb. Ic. Fl. Germ.* t. 33–36; *Ledeb. Fl. Ross.* iv. 436; *Aitchis. Cat. Panjab Pl.* 165; *Duthie Grass. N.W. Ind.* 29. A. diffusa, *Host Gram. Austr.* iv. t. 55. A. Michauxii, *Herb. Strach. & Winterb.* A. mutabilis, *Knapp Gram. Britt.* t. 28. A. Wightii, *Schmid. Coll. Pl. Nilgh.*; *Herb. Wight Propr.* 1746 (*in part*). A. Royleana, *Trin. Agrost.* ii. 125.

WESTERN HIMALAYA and WESTERN TIBET, alt. 6–11,500 ft., from Kashmir to Kumaon. SIKKIM, alt. 7500 ft. (introd. ?). NILGHIRI HILLS (introd.).—DISTRIB. N. temp. regions.

Stems 1–3 ft., stoutly ascending from a tufted base, erect, slender. *Leaves* rather short, flat, nearly smooth; ligule variable in length. *Panicle* 2–8 in. long, pyramidal. *Spikelets* green or purplish, usually shining; palea = about $\frac{1}{2}$ of gl. III.—The above description applies to the common Himalayan form of *A. alba*, and accords with the European. I have not cited its multitudinous synonyms, of which 50 are recorded in the "Kew Index," for many apply to obscure forms or varieties none of which occur in India; except var. *stolonifera* (A. stolonifera, *Host Gram. Austr.* t. 57) of which there are Nilghiri specimens, but no doubt introduced. The awned variety γ. *aristata*, Boiss. l. c., a widely distributed European, American, and Asiatic plant is noted as Tibetan by Boissier, but I have seen no specimens. It is a tall form with broad leaves. Boissier describes the branches of the panicle as rough in *alba*, but they are smooth in all Indian specimens. Wight's n. 1746 has a minute palea.

2. **A. verticillata,** *Vill. Fl. Delph.* 74; leaves scabrid, ligule very short truncate, panicle ovate or oblong contracted or expanded dense fld., branches scabrid, spikelets $\frac{1}{12}$ in., gls. I and II subequal subacute scaberulous keels strongly scabrid, III about $\frac{1}{3}$ shorter not awned tip truncate toothed, palea nearly = gl., callus quite glabrous. *Ledeb. Fl. Ross.* iv. 438; *Boiss. Fl. Orient.* v. 513; *Trin. Diss.* i. 195, *Sp. Gram. Ic.* t. 36; *Reichb. Ic. Fl. Germ.* t. 35. A. adscendens, *Lange in Kjoeb. Vidensk. Meddel.* (1860) 33. A. anatolica, *C. Koch. in Linnæa*, xxi. (1848) 379. A. densa, *Bieb. Fl. Taur. Cauc.* i. 56. A. diffusa, *Bess. Prim. Fl. Gallic.* i. 68. A. Muelleri, *Presl Bot. Bemerk.* 120. A. refracta, *Moench. Meth. Suppl.* 60. A. stolonifera, *Linn. Herb. non Sm.*; *Bieb. l. c.* iii. 62 (*ex Ledeb. l. c.* 439). A. Villarsii, *Poir. Encycl. Suppl.* i. 251.

The PANJAB; Hursa, *Aitchison.* KASHMIR; Chittapani Valley, *Levinge.* SIMLA, alt. 2–4600 ft. (*Griseb.*).—DISTRIB. N. temp. regions.

Stem long slender creeping, then ascending to 10–15 in. high. *Leaves* rather broad. *Panicle* 2–3 in., lobed, branches very short with densely fastigiate branchlets, and crowded very shortly pedicelled green spikelets.—Described as annual by Grisebach in Ledeb. Fl. Ross., but as perennial by other authors.

3. **A. subaristata,** *Aitch. & Hemsl. in Journ. Linn. Soc.* xix. (1882), 192, t. 29; leaves scabrid, ligule long, panicle elongate contracted or subeffuse, branches short scaberulous, spikelets $\frac{1}{12}$ in., gl. I and II subequal scaberulous tips aristulate, keels scabrid, III about $\frac{1}{3}$ shorter, tip truncate toothed, awn 0 or minute, palea nearly as long as the gl., callus quite glabrous. *Boiss. Fl. Orient.* v. 514.

KASHMIR, *Falconer*; at Sreenuggur and Nowgunji, alt. 5–6000 ft., *Clarke*.—DISTRIB. Affghanistan.

Stem long creeping and rooting below (as in *vulgaris*) then ascending, stout or slender. *Panicle* 3–6 in., dense- or lax-fld., branches flowering to the base. *Spikelets* pale, very shortly pedicelled, often densely packed. *Gl.* I and II membranous, with the median nerve sometimes produced into a very short awn; III dorsally awned in Affghan specimens.—Apparently a very distinct species, strongly resembling *A. vulgaris* in habit; the awned gl. I and II are found in no other Indian species. The Affghan specimens have larger and more scabrid subhispid spikelets.

4. **A. peninsularis,** *Hook. f.*; tall, very slender, erect, leaves very narrow strict, ligule short, panicle as broad as long very lax and open, branches 2–4-nate and branchlets long capillary simple in the lower half or more then very sparingly branched and few-fld., spikelets $\frac{1}{8}$ in., gl. I and II subequal, III nearly = II strongly 4-nerved tip truncate 2-aristulate, awn basal exserted, callus very shortly bearded, palea = gl. III lanceolate 2-nerved, anther as long as the gl. A. Hookeriana, *Herb. Wight.*

DECCAN PENINSULA, *Wight* (*Cat.* n. 1746, *in part*); ? Pulney Mts., *Wight.*

Stem 2 ft. or more, erect from the very base, stiff, leafy upwards. *Leaves* flat, 3–4 by $\frac{1}{6}$ in., erect, finely acuminate, nearly smooth. *Panicle* 3–4 in., branches in distant whorls, perfectly smooth. *Spikelets* green or purple. *Anthers* very large, purple, tips of cells almost beaked.—The Pulney plant has narrower more acuminate gl. I and II than the others, and III is shorter in proportion, but it is otherwise identical; its stamens are imperfect. Closely resembles *Calamagrostis pilosula.*

** Palea short or 0.

† *Gl. III awned.*

5. **A. canina,** *Linn. Sp. Pl.* 62; radical leaves narrow convolute cauline very narrow, ligule oblong, panicle oblong or ovate spreading in fl. contracted in frt., branches lax-fld., spikelets $\frac{1}{12}$–$\frac{1}{10}$ in., gl. I and II unequal lanceolate acute or acuminate, III $\frac{1}{4}$ shorter tip truncate 4-toothed, awn median to basal, palea 0, callus glabrous, anthers long. *Kunth Enum. Pl.* i. 222; *Host Gram. Austr.* iv. t. 53; *Engl. Bot.* t. 1856; *Knapp Gram. Britt.* t. 21; *Reichb. Ic. Fl. Germ.* t. 33; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 29; *Duthie Grass. N.W. Ind.* 29; *Ledeb. Fl. Ross.* iv. 440; *Boiss. Fl. Orient.* v. 516. Trichodium caninum, *Schrad. Fl. Germ.* i. 198. Agraulus caninus, *Beauv. Agrost.* 5, t. 4, f. 7.

WESTERN HIMALAYA and WESTERN TIBET; Kashmir, alt. 9–12,000 ft., *Clarke, Duthie*; Lahul, *Hay.* NILGHIRI HILLS, alt. 8000 ft., *Clarke* (introd. ?).—DISTRIB. N. temp. regions.

Stem 1–2 ft. very slender, rarely stoloniferous. *Leaves* $\frac{1}{16}$–$\frac{1}{10}$ in. broad. *Panicle* 2–4 in.; branches capillary, scaberulous or nearly smooth. *Spikelets* green, pale or purple; awn exserted, geniculate; callus sometimes minutely scabrid.—There are upwards of 30 recorded synonyms of this plant.

6. **A. brachiata,** *Munro mss.*; tall, very slender, leaves long, ligule very small, panicle effuse, branches branchlets and pedicels capillary divaricate, spikelets $\frac{1}{16}$ in. few distant very long-pedicelled, gl. I and II subequal oblong subacute, III nearly as long narrowly truncate, callus quite glabrous, awn median.—Sporobolus, *Wall. Cat.* n. 3769 B.

BEHAR; at Monghyr, *Wallich.*

Stem 2–3 ft. high or more, as slender as a sparrow's quill, weak and probably decumbent on bushes, internodes 6 in. long. *Leaves* 6–8 by $\frac{1}{6}$–$\frac{1}{4}$ in., finely acuminate, contracted towards the base, thin and flaccid. *Panicle* 6–12 in., quite smooth, branches 2–2$\frac{1}{2}$ in. long, opposite or in distant whorls of 3–5, horizontal; pedicels $\frac{1}{6}$–$\frac{1}{4}$ in. *Gl.* I and II equal, cymbiform; III as long as I and II, 5-nerved, mid-nerve reaching half way up; palea minute. *Grain* oblong, compressed, as long as the gl.—An extraordinarily delicate species, quite unlike any other and more resembling a *Sporobolus.* The specimens are advanced, in frt., and I have seen no awn, or any other indication of one except the shortened median nerve.

7. **A. filipes,** *Hook. f.*; very slender, leaves short very narrow, ligule very short, panicle very narrow elongate, branches short alternate and 2–3-nate erect smooth, spikelets $\frac{1}{14}$–$\frac{1}{12}$ in. shortly pedicelled erect, gl. I and II unequal acute, III $\frac{1}{3}$ shorter tip truncate nearly entire, callus quite glabrous, awn dorsal from above the middle geniculate, palea minute.

KHASIA HILLS, alt. 5–6000 ft., in several places, *Clarke.*

Stem 8–15 in., erect or geniculate below, densely tufted, base hard. *Radical leaves* many, tufted, 1–2 in., subulate, cauline rather longer and broader. *Panicle* 2–4 in., interrupted; branchlets $\frac{1}{4}$–$\frac{3}{4}$ in., capillary, shortly naked below, smooth. *Spikelets* green or pale reddish; gl. I and II with scabrid keels; awn shortly exserted. *Anthers* very short. *Grain* ovoid, acute.—Nearest to *A. canina,* but the long very narrow interrupted panicle is constant in all the specimens from five distant localities at different elevations.

Var.? palea 0, grain linear-oblong. A. nervosa, *Nees, var.* aristata, *Munro in Herb.* Kew.—Sikkim; at Lachoong, alt 9000 ft.

8. **A. Hookeriana,** *Clarke mss.* (*non Munro*); very slender, leaves very narrow flaccid, ligule oblong, panicle broad with rather distant whorls of few very long flexuous capillary branches naked and unbranched for half their length, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in., gl. I and II unequal lanceolate acuminate, III about $\frac{1}{3}$ shorter tip truncate denticulate, callus glabrous or minutely hairy, awn dorsal.

SIKKIM HIMALAYA, alt. 9–11,000 ft., in meadows, *J. D. H.* *Cummins* (in Herb. *Clarke*).

Stem 1–2 ft. *Leaves* 2–6 in., flat, $\frac{1}{12}$ in. broad. *Panicle* 2–6 in., branches 2–3 in., minutely scaberulous; pedicels as long as the spikelets or longer. *Spikelets* green, rather distant; awn exserted; callus sometimes distinctly but minutely bearded. *Anthers* linear. *Grain* oblong.—Spikelets very much larger than in the foregoing species. This is not *A. Hookeriana,* Munro ex Duthie Grass. N.W. Ind. 30, nor *Lachnagrostis Hookeriana,* Nees ex Steud. Syn. Gram. 192.

†† *Gl. III not awned.*

9. **A. micrantha,** *Steud. Syn. Gram.* 70; tall, rather slender, leaves narrow, ligule oblong, panicle elongate inclined contracted in fl., branches long capillary smooth spreading in fruit, spikelets $\frac{1}{16}$–$\frac{1}{12}$ in., gl. I and II unequal oblong-lanceolate acute, III $\frac{1}{4}$–$\frac{1}{3}$ shorter tip truncate crenate callus

quite naked, nerves very faint, palea = about $\frac{1}{4}$ gl., anthers about $\frac{1}{3}$ gl.—A. Wightii, *Munro in Herb. Hook. f. & T. in part*).—Agrostis, *Wall. Cat.* n. 3776.

Central Himalaya, alt. 4–6000 ft., from Garwhal to Sikkim. ?Khasia Hills, alt. 5000 ft., *Clarke.*

Stem 2–3 ft., tufted, rather stout below in Wallich's specimens. *Leaves* 3–6 in., by $\frac{1}{10}$–$\frac{1}{6}$ in., rarely broader, scaberulous. *Panicle* 4–10 in., lax-fld., slightly scaberulous, branches naked till towards the tips, lower whorled or fascicled; top of pedicels clavate. *Spikelets* green, gl. III 5-nerved, nerves all very slender or evanescent, the median sometimes arrested half way. *Grain* linear-oblong.—Steudel describes the palea as long as the gl., but it never exceeds $\frac{1}{4}$ of that organ. The Khasian specimens have a much reduced panicle and much smaller palea.

10. **A. myriantha,** *Hook. f.*; stems stout leafy, leaves broadly linear-lanceolate, ligule short, panicle 4–12 in. inclined contracted many- and dense-fld., rachis rather stout, branches fascicled or whorled often flg. to the base, spikelets $\frac{1}{20}$–$\frac{1}{10}$ in., gl. I and II subequal oblong subacute, III nearly as long tip truncate crenate, nerves very faint, callus quite naked, palea = $\frac{1}{4}$–$\frac{1}{3}$ gl., anthers $\frac{1}{3}$–$\frac{2}{3}$ gl.—Agrostis, n. 7 *Herb. Hook. f. & T.*

Sikkim Himalaya; alt. 9–12,000 ft., common. Khasia Hills, alt. 4–6000 ft., common.

Stem 1–5 ft., suberect or geniculate below. *Leaves* 4–12 by $\frac{1}{8}$–$1\frac{1}{2}$ in., scaberulous. *Panicle* 6–12 in., contracted in flower, less so in frt.; branches very many in many fascicles, strict, erect, sometimes naked for half their length. *Spikelets* pale green, or brownish shortly pedicelled; gl. I and II scaberulous on the keels; III 5-nerved, nerves anthers palea and grain as in *A. micrantha.*—Very near *A. micrantha,* but a much more leafy species, with shorter and broader gl. I and II, and III longer in proportion.

Var. *sikkimensis*; stem 1–2 ft., leaves 4–8 by $\frac{1}{8}$–$\frac{1}{6}$ in., ligule oblong, anthers = $\frac{1}{3}$ the gl.—Sikkim, common in woods.

Var. *khasiana*; stem 3–5 ft., sometimes as thick as a goose-quill below, leaves 6–12 by $\frac{1}{4}$–$\frac{1}{2}$ in., ligule often 0, panicle up to 12 in., anthers = $\frac{2}{3}$ the gl.—Khasia Hills, abundant.

11. **A. Clarkei,** *Hook. f.*; very slender, leaves very narrow, ligule short, panicle broadly pyramidal, branches capillary spreading sparingly divided, spikelets $\frac{1}{12}$–$\frac{1}{10}$ in., gl. I and II very unequal narrowly lanceolate acuminate, III much shorter than II 5-nerved nerves slender, tip truncate crenate, callus quite glabrous, palea very minute or 0. A. canina, *Munro in Herb. Ind. Or. Hf. & T.* (*in part*).

Western Himalaya; *Herb. Royle*; Sikkim, alt. 9–11,000 ft., *J. D. H.*, *Clarke, Cummins.*

Stem 6–14 in., suberect. *Lowest leaves* filiform, upper flat, all very narrow, scaberulous. *Panicle* $1\frac{1}{2}$–7 in., branches spreading in fl. and frt., smooth or nearly so, naked below, lower geminate or in whorls of 3–5. *Spikelets* narrow, green purplish or very dark purple; gl. I $\frac{1}{4}$ or more longer than II, very finely acuminate, keel scabrid; III short and broad.—Regarded by Mr. Clarke as an awnless form of *A. canina,* but besides wanting the awn, gl. I and II are narrower and more acuminate, and III much shorter.

12. **A. inæquiglumis,** *Griseb. in Goett. Nachr.* (1868) 80; stems 4–6 in. densely tufted stiff stout, leaves filiform or nearly so, ligule short, panicle spiciform dense-fld., branches very short, spikelets $\frac{1}{14}$–$\frac{1}{10}$ in., gl. I and II unequal ovate-lanceolate acute, III $\frac{1}{4}$ shorter than II tip narrowly

truncate crenate, callus quite naked, palea minute or 0, anthers short. Agrostis n. 10, *Herb. Ind. Or. Hook. f. & Thoms.*

Sikkim Himalaya; alt. 12–16,000 ft., *J. D. H.*, *Clarke*, &c.

Stem 4–6, rarely 8 in. *Leaves* usually convolute, upper sometimes flat, not $\frac{1}{12}$ in. broad; lower sheaths green or purple. *Panicle* 1–2 in., strict, branches stout densely imbricating, flg. to the base. *Spikelets* very shortly and stoutly pedicelled, green or dark purple.—A very common alpine grass, constant in habit at all elevations.

13. **A. divaricata,** *Griseb. in Goett. Nachr.* (1868) 82; stems 4–6 in. densely tufted capillary, leaves capillary, panicle small with widely spreading divaricate sparingly divided branches and capillary pedicels, spikelets $\frac{1}{18}$–$\frac{1}{16}$ in., gl I and II very unequal ovate-lanceolate, I acute, II acuminate, III about $\frac{1}{4}$ shorter than II tip truncate crenulate, nerves very faint, callus quite glabrous, palea most minute orbicular, anthers short. *Herb. Ind. Or. Hf. & T. No.* 11.

Sikkim Himalaya, Yeumtong, on moist banks, alt. 13,000 ft., *J. D. H.*

The most delicate little species known to me, resembling *Aira caryophyllea* in size and slenderness, but growing in dense tufts. *Leaves* about 1 in., convolute, flexuous; ligule short, oblong. *Panicle* about 1 in. long and broad, branches geminate, quite smooth. *Spikelets* remote, purple, keels of gl. I and II scabrid, pedicels rather long. *Grain* oblong.—A single specimen of a Sikkim *Agrostis* in Herb. Calcutta (n. 663 in part) without further habitat, resembles this in the small stature and panicle, but has a much stouter stem, and flat leaves about $\frac{1}{10}$–$\frac{1}{18}$ in. gl. I and II are more obtuse. More specimens of both are much wanted.

DOUBTFUL SPECIES.

A. Nervosa, *Nees ex Trin. in Mem. Acad. Petersb. Ser.* VI. vi. II (1845) 328; *Steud. Syn. Gram.* 165; *Duthie Grass. N.W. Ind.* 30; leaves flat, ligule very short, panicle 4 in. lower branches 4-nate naked below, gl. I and II subequal hardly $\frac{1}{12}$ in. acute, III $\frac{1}{3}$ shorter, awn 0, palea rather shorter than the ovary, callus very shortly retrorsely pilose.—Nepal. (See *Calamagrostis pilosula*).

A. Procera, *Retz. Obs.* iv. 19. ? *Thysanolæna Agrostis.*

A. Wightii, *Nees ex Steud. l. c.* 168; leaves flat margins scabrous, ligule ovate, panicle long capillary, branches 2–4-nate, branchlets 2–3-chotomous scabrid, gl. I and II equal subobtuse, keel scabrid III = II 3-denticulate, palea rather longer than the ovary ovate-lanceolate acute. Vilfa vulgaris, *Wight Herb.* 78 (ex Steud.).

A. Zenkeri, *Steud. l.* c. 170; stem exceedingly slender scaberulous above, leaves 1–1½ in. erect strict convolute retrorsely scabrid, ligule obtuse, panicle pyramidal, rays 2-nate widely spreading, spikelets 1½ line purple, gl. I and II equal acute, III as long shortly denticulate 5-nerved awn 0, palea as long 2-nerved, callus hairy all over.—*Nilghiri Hills.*

73. **MUEHLENBERGIA,** *Schreb.*

Annual or perennial very slender grasses. *Leaves* narrow, flat. *Spikelets* very numerous and minute, 1-fld., panicled, terete, not jointed on their pedicels; rachilla jointed at the base, not produced. *Glumes* 3, I and II persistent, equal or unequal, 1-nerved; III as long or longer than I and II, terete, membranous, 3-nerved, hairy below the middle, tip acute or minutely 2-toothed awned, awn very slender not twisted; palea oblong, as long as the gl. or longer, 2-nerved, nerves almost meeting in the tip; callus minute. *Lodicules* 2, very minute. *Anthers* short or long. *Styles* free, stigmas short. *Grain* cylindric, free in the gl. and palea.—Species about 60 chiefly temp. American.

The above character applies to the Indian species; of the American some have only one empty gl., in others gl. III is awnless or 5-nerved.

1. **M. sylvatica,** *Torr. & Gr. ex Trin. in Mem. Acad. Petersb. Ser.* VI. vi. II. (1845) 292 (*excl. syn. viridissima*); panicle erect contracted interrupted, branches very short fig. to the base, spikelets very shortly pedicelled, gl. I and II $\frac{1}{12}$–$\frac{1}{10}$ in. lanceolate acuminate, III about as long, awn $\frac{1}{6}$–$\frac{1}{2}$ in. *Steud. Syn. Gram.* 179; *A. Gray Man. Bot. N. U. St.* 612, t. 8; *Duthie Grass. N.W. Ind.* 28. M. Duthiæana, *Hack. in Herb. Duthie.* Agrostis diffusa, *Muehlb. Descr. Gram.* 64. A. sylvatica, *Torrey Fl. N. Am.* i. 87 (*non Linn.*).

WESTERN HIMALAYA; from Kashmir to Kumaon, alt. 4–9000 ft., *Royle, &c.*—DISTRIB. Japan, N. Am.

Stem 1–3 ft., very slender, branched, decumbent and creeping below. *Leaves* 3–5 by $\frac{1}{10}$–$\frac{1}{6}$ in., smooth or scaberulous; ligule very short, lacerate. *Panicle* 4–6 in., pale green or violet; rachis and very short erect branches and pedicels scabrid. *Spikelets* crowded, erect; gls. I and II subequal, 1–3-nerved, keels scabrid; III minutely notched at the tip, hairs much shorter than the gl.; palea about as long as its gl.

2. **M. viridissima,** *Nees ex Steud. Syn. Gram.* 178; panicle elongate much fastigiately branched flexuous interrupted branches and pedicels slender, gls. I and II $\frac{1}{20}$–$\frac{1}{16}$ in. equal or unequal, III twice as long or longer, awn $\frac{1}{3}$–1 in. *Duthie Grass. N.W. Ind.* 28. M. Huegelii, *Trin. in Mem. Acad. Petersb. Ser.* VI. vi. II. (1845) 293. M. geniculata, *Nees ex Steud. Syn. Gram.* 178; *Duthie l. c.*—Podosaemum, *Wall. Cat.* n. 3778.

TEMPERATE HIMALAYA, alt. 3–9000 ft., from Kashmir to Sikkim and the KHASIA HILLS.

Habit of *M. sylvatica*, but usually a larger grass, with longer broader leaves and a loose interrupted flexuous bright green panicle often a foot long. *Spikelets* shortly pedicelled; gls. I and II very variable, both ovate-lanceolate 1-nerved and shortly awned with scabrid keels and awn, or I much smaller oblong or orbicular erose and nerveless.

3. **M. himalayensis,** *Hack. in Herb. Duthie* n. 10,128; panicle elongate much fastigiately branched interrupted, branches and pedicels slender, gls. I and II $\frac{1}{8}$–$\frac{1}{6}$ in. subequal lanceolate acuminate or subaristate, III as long as I and II or rather longer, awn $\frac{1}{2}$–1 in.

WESTERN HIMALAYA, alt. 6–7000 ft., from Chamba to Simla, *Thomson, Madden, &c.*

Stem 12–18 in., very slender, decumbent or ascending, branched. *Leaves* narrow, flaccid; ligule oblong. *Panicle* 3–6 in., very narrow, slender, flexuous, flaccid, branches distant. *Spikelets* bright green, glistening, larger than in *sylvatica* and *viridissima* to which latter it is most nearly allied, differing in being more slender with narrower leaves, in the laxer, fewer fld. panicle, in the larger spikelets, and in gl. III not being much longer than I and II.

74. **CALAMAGROSTIS**, *Adans.*

Stout or slender grasses. *Leaves* narrow. *Spikelets* in narrow or effuse panicles, 1-fld., not jointed on the pedicels; rachilla jointed at the base, not produced beyond gl. III. *Glumes* 3, I and II equal or unequal, lanceolate, acuminate, glabrous or scaberulous; III shorter, hyaline, truncate, crenate or cleft, glabrous or hairy, awned, paleate; palea often minute, rarely 0; callus bearded with long or short hairs.—Species about 15? natives of cold and temp. climates.

See remarks under *Agrostis* (p. 253). See also *Deyeuxia abnormis*, which is intermediate between that genus and *Calamagrostis*.

* Glume III glabrous.

† Hairs of callus longer than gl. III.

§ *Glume III dorsally awned at the middle or below it.*

1. **C. epigejos,** *Roth. Tent. Fl. Germ.* i. 34; stem stout creeping below, leaves glaucous scaberulous, ligule long acute, panicle dense, branches scaberulous, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in., gl. I and II subequal subulate-lanceolate, III = $\frac{1}{3}$ II tip 2-fid, awn dorsal at or near the middle, palea = $\frac{1}{2}$–$\frac{3}{4}$ gl. III, hairs of callus as long as gls. I and II. *Kunth Enum. Pl.* i. 237, *Suppl.* 184; *Host Gram. Austr.* iv. 24, t. 42. *Reichb. Ic. Fl. Germ.* t. 43; *Ledeb. Fl. Ross.* iv. 432; *Boiss. Fl. Orient.* v. 525; *Duthie Grass. N.W. Ind.* 30. C. georgica & thyrsoides, *C. Koch in Linnæa*, xxi. (1848) 387, 388. C. glomerata, *Boiss. et Bühse in Mem. Soc. Nat. Mosc.* xii. (1860) 229. C. lithuanica & vilneensis, *Schult. Mant.* iii. 602. C. lanceolata, *Stokes in With. Arr. Brit. Pl. Ed.* III. ii. 122. C. glauca & Huebneriana, *Reichb. Fl. Germ. Excurs.* 27, *Ic. Fl. Germ.* t. 43. C. rigens, *Fries Summ. Veg. Scand.* 240. Arundo epigejos, *Linn. Sp. Pl.* 81; *Engl. Bot.* t. 402; *Fl. Dan* t. 2165; *Knapp Gram. Britt.* t. 97.

KASHMIR, alt. 8–14,000 ft., *Falconer*, &c.—DISTRIB. N. Asia. Europe. S. Africa.

Stem 2–4 ft., erect, usually stout. *Leaves* long, narrow, finely acuminate, scaberulous, more or less glaucous; ligule oblong, rather long, acute. *Panicle* 6–12 in. or more, oblong or lanceolate, much branched, branches usually erect. *Spikelets* shortly pedicelled, erect, green or light or dark purple; gl. I and II subequal or II the longest, 1-nerved or II 3-nerved, keel and often margins scaberulous; III glabrous, smooth or scaberulous, awn equalling its gl.

2. **C. decora,** *Hook. f.*; stems tall tufted very slender, leaves very long flat, panicle loosely branched, spikelets $\frac{1}{5}$ in., gls. I and II subequal lanceolate, scaberulous, III = $\frac{2}{3}$–$\frac{3}{4}$ I truncate 4-cuspidate, awn subbasal exserted, palea as long as the gl., callus hairs rather longer than gl. III.

KASHMIR; Astor Valley, alt. 9–10,000 ft., *Duthie* (n. 12,660).

Stem 4–5 ft. or more. *Leaves* 12–18 by $\frac{1}{4}$ in., scaberulous, pale green; sheath smooth; ligule large, oblong, rounded. *Panicle* 3–8 in., pale green, rachis slender and fascicled branches scaberulous, branches naked below. *Spikelets* shortly pedicelled, suberect; gls. I and II hardly membranous, finely acuminate, keels scaberulous, I 3-nerved; III glabrous, except the callus; awn shortly exserted. *Anthers* linear.

§§ *Glume III awned in the upper third or tip.*

3. **C. emodensis,** *Griseb. in Goett. Nachr.* (1868) 80; stem stout creeping below, leaves long broad flat glaucous scaberulous, panicle dense or effuse much-branched, spikelets $\frac{1}{4}$ in. crowded, gl. I and II unequal subulate-lanceolate, III = $\frac{1}{2}$ I cleft to about the upper $\frac{1}{3}$ awned in the cleft, awn exserted, palea = $\frac{2}{3}$–$\frac{3}{4}$ its gl. C. nepalensis, *Herb. Strach. & Winterb.* (*in part*). Calamagrostis, *Wall. Cat.* n. 3781 B.

Temperate Himalaya, alt. 7–12,000 ft., from Kashmir to Bhotan, *Falconer*, &c.

Stem 3–5 ft., as thick as a goose-quill below. *Leaves* 12–18 by $\frac{1}{2}$–$\frac{2}{3}$ in., thinly coriaceous, pale glaucous green, many-nerved; sheath nearly smooth or scaberulous; ligule oblong, membranous. *Panicle* 6–10 in., inclined or nodding, very soft, shining and silky, pale grey; branches branchlets and very short pedicels capillary, smooth, or minutely scaberulous. *Glumes* I and II very thin, smooth, keels scaberulous, I 1-nerved; II 3-nerved; III glabrous, hyaline, usually cleft from the upper third into two lanceolate subulate-acuminate lobes; but the lobes are sometimes irregularly lacerate at the tip; nerves 5, faint.

4. **C. littorea**, *DC. Fl. Franc.* v. 255; stem stout or slender creeping below, leaves narrow scaberulous often convolute, ligule oblong, panicle dense or effuse, spikelets $\frac{1}{6}$–$\frac{1}{4}$ in., gl. I and II unequal subulate-lanceolate scaberulous, III = $\frac{1}{2}$-$\frac{2}{3}$ I tip truncate erose or toothed, awn terminal in a notch or short cleft or dorsal below the tip included, palea nearly as long as the gl. *Kunth Enum. Pl.* i. 237; *Reichb. Ic. Fl. Germ.* t. 42; *Boiss. Fl. Orient.* v. 524; *Steud. Syn. Gram.* 187. C. glauca, *Reichb. Fl. Germ. Excurs.* 27. C. lanceolata, *Aitchis. in Journ. Linn. Soc.* xviii. (1880) 107 (*non Roth.*). C. laxa, *Host Gram. Austr.* iv. 25, t. 43; *Ledeb. Fl. Ross.* v. 432; *Herb. Ind. Or. Hf. & T.* (*in part*); *Griseb. in Goett. Nachr.* (1868) 80. C. nepalensis, *Nees ex Steud. Syn. Gram.* 193; *Duthie Grass. N. W. Ind.* 30; *Aitchis. in Trans. Linn. Soc. Ser. II. Bot.* iii. 124. Arundo glauca, *M. Bieb. Fl. Taur. Cauc.* i. 79. A. laxa, *Roem. & Sch. Syst.* ii. 502. A. littorea, *Schrad. Fl. Germ.* i. 212, t. 4, f. 2.—Calamagrostis, *Wall. Cat.* n. 3781 A.

Temperate Himalaya, alt. 6–10,000 ft. from Kashmir to Sikkim. Western Tibet, alt. 10–12,000 ft.—Distrib. Europe, N. and W. Asia.

Stem 2–5 ft., erect, as thick as a crow-quill or small goose-quill, but sometimes very slender. *Leaves* 12–18 by $\frac{1}{12}$–$\frac{1}{6}$ in., firm, smooth or scaberulous, flat or convolute; sheaths smooth; ligule linear-oblong. *Panicle* very variable in form and composition, erect or inclined, green or purple, rachis and branches scaberulous. *Spikelets* rarely $\frac{1}{4}$ in. long, sometimes only $\frac{1}{8}$ in., when the outer glumes are broader; gl. I and II with scaberulous keels, I usually about $\frac{1}{4}$ longer than II, but sometimes subequal, I 1-nerved and II 3-nerved at the base, but both sometimes 3-nerved; III glabrous, smooth or faintly scaberulous, faintly 5-nerved; awn very slender, variable in length, rarely longer than its gl.—A very difficult plant to define satisfactorily so much do the spikelets vary in size, in the breadth of the empty gls., and in the incision of the top of gl. III, which is either rounded and obtusely 2-toothed with an awn in the sinus, or truncate with a terminal awn, or 2-lobed nearly $\frac{1}{4}$ way down with lobes irregularly incised and the awn in the sinus, or finally the awn may be strictly dorsal below the truncate tip. Dr. Stapf, who has revised the whole of the Indian material which I had referred to this species, confirms the above view of its variation, and agrees with me in referring it to the European *C. littorea.*

Var. *tartarica*; stem shorter stouter, leaves convolute, panicle strict narrowly oblong dense-fld., spikelets usually dark purple. C. tartarica, *Jacquem. mss.* C. laxa, var. robustior, *Herb. Hf. & T.*—Common in the drier districts especially in Western Tibet.

5. **C. Stolizkai,** *Hook. f.*; stem short stout, leaves erect convolute, panicle short oblong contracted dense, spikelets $\frac{1}{6}$ in. shortly pedicelled, gl. I and II subequal lanceolate acuminate scaberulous, III about $\frac{1}{3}$ shorter than II tip truncate 4-aristulate, awn terminal exserted, palea as long as its gl., hairs of callus rather longer than gl. III shorter than I and II.

Western Tibet; Zanskar, on the Pensi-la, alt. 12–15,000 ft., *Stolizka.*

Stem 18–24 in., erect. *Leaves* 3–6 by $\frac{1}{6}$–$\frac{1}{4}$ in., very scabrid above; sheaths scaberulous; ligule oblong. *Panicle* 4 in.; branches short, erect or suberect, scabrid. *Spikelets* erect, crowded, pale, shining; gl. I and II hyaline, sub 3-nerved; III glabrous, hairs of callus unequal in length; awn about twice as long as the spikelet, straight, shortly exserted.—I have seen only two specimens.

6. **C. debilis,** *Hook. f.*; very slender, leaves short very narrow, panicle narrow, branches few rather short laxly flowering and pedicels capillary, spikelets $\frac{1}{6}$ in. pale, gls. I and II unequal lanceolate acuminate keels quite smooth, III about $\frac{1}{3}$ shorter than II or less, tip truncate erose, awn dorsal in upper third of the gl. exserted, palea as long as its gl., hairs of callus = gl. I and II.

Sikkim Himalaya; Chola, alt. 11,000 ft., *J. D. H.*

Stem 12–18 in., tufted, geniculate below. *Leaves* distant, 1–2 by $\frac{1}{16}$–$\frac{1}{12}$ in., flat, quite smooth, upper shorter spreading; sheath smooth; ligule oblong. *Panicle* 2–5 in., branches and branchlets smooth. *Spikelets* pale purplish brown, long-pedicelled; gl. I and II 1-nerved; III glabrous, 5-nerved. *Anthers* very small.—I found this very delicate species only once and then late in the season, the very small anthers are peculiar.

†† Hairs of callus much shorter than gl. III.

7. **C. tripilifera,** *Hook. f.*; very slender, leaves short narrow flat, panicle of few very long wide spreading 2–3-nate branches sparingly divided towards the ends, spikelets $\frac{1}{6}$ in. long-pedicelled, gls. I and II subequal lanceolate acuminate, III firm $\frac{1}{3}$ shorter than I tip truncate with 2 short lateral awns and a median dorsal exserted awn, palea $\frac{1}{3}$ shorter than its gl., hairs of callus very unequal.

Sikkim Himalaya; in the drier interior, alt. 10–13,000 ft. *J. D. H.*, *Clarke*, *King's Collector.*

Stem tufted, 8–18 in., erect, hardly thicker than pack-thread. *Leaves* 4–6 by $\frac{1}{10}$–$\frac{1}{6}$ in., rather flaccid, quite smooth; sheaths smooth; ligule oblong. *Panicle* with few whorls of few quite smooth capillary branches 1–2 in. long each bearing 3–5 glistening pale yellow on dull purplish spikelets on pedicels longer than themselves; gls. I and II 1-nerved, quite smooth, even the keels; III glabrous, rather strongly 4-nerved, tip with mucros between the lateral and middle awns, the latter of which is stiff and nearly twice as long as its gl.; callus hairs nearly half as long as gl. III.

Var. *Cumminsii*; panicle contracted, branches much stouter appressed to the rachis, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in.—N.E. Sikkim, *Cummins.*—Perhaps a different species, but the stems, about a span long, being curved in a semicircle, show that the plant has grown under unfavourable conditions.

** Glume III hairy all over; callus hairs shorter than gl. III.

† *Palea of gl. III nearly as long as its gl.*

8. **C. Munroana,** *Boiss. Fl. Orient.* v. 523; very slender, leaves long narrow, panicle effuse or contracted, spikelets $\frac{1}{16}$–$\frac{1}{10}$ in., gls. I and II subequal oblong-lanceolate acute 1-nerved, keels nearly smooth, III = $\frac{3}{4}$ I broadly truncate crenate, awn short infra-median included or 0, callus shortly hairy, anthers short. Agrostis ciliata, *Herb. Strachey & Winterbottom*; *Herb. Ind. Or. Hf. & T. in part*; ?*Duthie Grass. N.W. Ind.* 29 (*non Nees*). A. Munroana, *Aitch. & Hemsl. in Journ. Linn. Soc.* xix. (1882) 192. A. pilosula, *Hack. in Herb. Duthie* n. 6231 (*non Trin.*). A. Royleana, *Duthie l. c.* 30.

WESTERN HIMALAYA, from Kashmir to Kumaon, alt. 8–12,000 ft., *Royle*, &c. —DISTRIB. Affghan.

Stems 6–18 in., tufted, roots fibrous. *Leaves* 2–8 in., scaberulous or nearly smooth, flaccid, or in high altitudes strict; sheaths nearly smooth; ligule variable. *Panicle* 2–5 in., oblong or pyramidal; branches capillary, erect or spreading, lower fascicled or 2–3-nate, smooth or minutely scaberulous, lower often long spreading and naked below. *Spikelets* pedicellled, green or purplish; gl. I and II very thin, smooth; III hairy all over; palea as long as its gl. or $\frac{1}{4}$ shorter.—A very variable plant, one of two (the other is *C. pilosula*) which have been referred by Munro and others to *Agrostis Royleana*, Trin., a plant described by Trinius as having the bearded rachilla proper to *Deyeuxia* (see end of genus). I have in vain sought to identify *Munroana* with any other of the Roylean species, none of which are accurately described.

Var. *stricta*; stem 6–10 in. strict, leaves very narrow rather stiff erect, panicle contracted, branches short erect or spreading, pedicels very short, spikelets green or purple, gl. III always awned. Agrostis No. 4, *Herb. Strach. & Winterb.*—Common at altitudes of 11–15,000 ft. Though differing entirely in habit from the lax open panicled form of *Munroana*, I feel sure that this is only the alpine form of that plant from intermediates occurring between them. It resembles *Agrostis inæquiglumis*, Griseb.

9. **C. Griffithiana,** *Hook. f.*; tall, erect, leaves long narrow subcoriaceous, panicle long narrow branches suberect, spikelets $\frac{1}{8}$ in., gl. I and II subequal lanceolate acute, III narrow tip truncate with 4 short bristles the lateral longest, awn subbasal to median exserted, hairs of callus very short, anthers linear. C. Hookeriana, var. aspera, *Munro in Herb. Hf. & T.* Agrostis Royleana, *Munro in Herb. Strach. & Winterb.* n. 2. Lachnagrostis Griffithiana, *Munro Cat. Pl. Griff. Falc.* &c. 67 *ined.* Deyeuxia Griffithii, *Munro l. c.* 56.

WESTERN HIMALAYA; Kumaon, alt. 5500 ft., *Strachey & Winterb.* KHASIA HILLS, alt. 5000 ft., *Griffith* (*Kew distrib.* n. 6598), *Hf. & T.* &c.

Stem 2–3 ft., quite erect, as thick as a crow-quill. *Leaves* 6–10 by $\frac{1}{8}$–$\frac{1}{6}$ in., and sheaths smooth or subscaberulous; ligule very short. *Panicle* erect; branches 2–4 in., 2–5-nate, naked for half their length, then with crowded branchlets and shortly pedicelled green or purplish spikelets. *Spikelets* $\frac{1}{8}$ in., III hairy all over; palea nearly as long as its gl.—A much taller and stouter plant than any form of *C. Munroana*, with much larger spikelets, short callus hairs, and linear anthers. A fourth imperfect gl. sometimes occurs.

†† *Palea of gl. III very short, rarely* = $\frac{1}{2}$ *its gl.*

10. **C. pilosula,** *Hook. f.*; stem very slender erect, leaves long

narrow flat, panicle effuse or contracted, branches long or short suberect or spreading, spikelets $\frac{1}{10}$–$\frac{1}{8}$ in., gl. I and II subequal oblong-lanceolate acute or acuminate 1-nerved smooth, III oblong tip truncate erose or crenate with sometimes 4 minute setulae, awn subbasal exserted, hairs of callus = $\frac{1}{3}$ gl. III or shorter, anthers linear. Agrostis pilosula, *Trin. in Mem. Acad. Petersb. Ser.* VI. vi. II. (1845) 372.

TEMPERATE and ALPINE HIMALAYA, alt. 6–14,000 ft., from Kashmir to Sikkim. NILGHIRI HILLS, alt. 3–6000 ft., *Wight, Schmid, Jacquemont*, &c. CEYLON, alt. 6–8000, *Walker*, &c.

Stems 1–3 ft. or more, tufted, 6–10 in. in alpine specimens, erect from a short inclined base. *Leaves* variable in breadth, up to $\frac{1}{4}$ in., but usually very narrow, flaccid, smooth or subscaberulous; sheath smooth; ligule very variable, longest in the upper leaves. *Panicle* very variable, large and effuse with spreading branches 1–4 in. long naked below and with loosely crowded spikelets at the extremities, or contracted with suberect shorter branches, or short broadly ovate or triangular; branches branchlets and pedicels minutely scabrid. *Spikelets* membranous, green and glistening in the larger forms, purple in others and more herbaceous in the alpine; gl. I and II smooth or subscaberulous, I rather the shortest, keels near or quite smooth, rarely scabrous; III $\frac{1}{4}$–$\frac{1}{3}$ shorter than I, hyaline, hairy all over, nerves often indistinct; palea usually very minute, rarely nearly half as long as its gl.; awn more or less exserted.—A very variable grass of which Wallich's No. 3775 A from Nepal, with spikelets $\frac{1}{12}$ in. long may be regarded as the type; his B has rather larger spikelets, but is not otherwise different. I am far from supposing that I have succeeded in unravelling its synonymy which is inextricably confused with *C. Munroana Agrostis alba* and others. The following are marked forms in their typical states as defined, but they pass into one another.

Var. *Wallichiana*; very slender, leaves narrow sometimes filiform smooth, panicle 2–3 in., branches spreading lax-fld., spikelets green or purple. Agrostis ciliata, *β*, *Nees* in *Herb. Royle.* A. Hookeriana, *Munro in Herb. Kew* (*non Steud.*). A. Neesii, *Steud. l. c.* 293. A. nervosa, var. aristata, *Munro in Herb. Hook. f. & T. & Herb. Falconer.* A. Royleana, *Duthie Grass. N.W. Ind.* 30 (*non Trin.*). A. Wallichiana, *Steud. Syn. Gram.* 174. Lachnagrostis ciliata, *Munro in Herb. Jacquem.* n. 215. L. Hookeriana, *Munro mss.* Arundinella Hookeriana, *W. & A. ex Arn. in Herb. Kew* (Ceylon).—*Agrostis Wall. Cat.* n. 3775.—*Agrostis* n. 5, *Herb. Strachey & Winterb.*—A common form.

Var. *scabra*; stem 2–4 ft. stout, leaves 6–12 by $\frac{1}{4}$–$\frac{1}{2}$ in., panicle very large effuse with long spreading horizontal capillary branches sometimes 4–5 in. long in distant whorls or fascicles, spikelets $\frac{1}{12}$–$\frac{1}{7}$ in. pale green, gl. III with the truncate tip sometimes minutely 2–4-mucronulate. Agrostis bicuspidata, *Hack. in Herb. Duthie* n. 10,088. A. Royleana, *Hack. l. c.* n. 7583. Lachnagrostis scabra, *Nees in Herb. Royle.*—In woods at about 7–10,000 ft. from Kashmir to Sikkim.

Var. *alpestris*; stem 6–18 in. strict, leaves narrow strict, panicle shorter narrow or broad, spikelets smaller $\frac{1}{12}$–$\frac{1}{10}$ in. dark purple rarely green, gls. I and II oblong-lanceolate, palea sometimes = $\frac{1}{2}$ its gl. Agrostis nervosa, *Nees in Herb. Royle*; ?*Trin. in Mem. Acad. Petersb. Ser.* VI. vi. II. (1845) 328. A. Royleana, *Nees l. c.* (*non Trin.*). A. ciliata, *β*. nervosa, *Nees in Herb. Royle.* A. Roylei, *Trin. ex Hack. in Herb. Duthie* n. 6229.—Kashmir to Sikkim, alt. 11–15,000 ft. —A common grass at high elevations.

Var. *ciliata*; panicle narrow effuse, rachis flexuous, spikelets $\frac{1}{6}$ in. shortly pedicelled pale shining, palea = $\frac{1}{4}$ its gl. Calamagrostis ciliata, *Steud. Syn. Gram.* 193. Agrostis ciliata, *Trin. l. c.* 373. Lachnagrostis ciliata, *Nees ex Steud. l. c.*—N.W. India, *Royle.* An obscure plant of which I have seen a single specimen from Herb. Royle.

11. **C. Schmidii**, *Hook. f.*; stem very slender erect, radical leaves tufted on a woody branched rootstock linear-lanceolate rigid narrowed into

a slender petiole, cauline filiform convolute, panicle short broad, branches few and long pedicels capillary, spikelets few $\frac{1}{8}$–$\frac{1}{6}$ in., gl. I and II unequal lanceolate, III truncate bicuspidate from the outer pair of nerves, awn subbasal exserted, callus hairs short, anthers linear.

NILGHIRI HILLS; Ootacamund, *Schmid.*

Rootstock as thick as a crow-quill. *Stem* filiform. *Radical* leaves 2–3 in., glabrous, nerves strong; petiole very slender stiff; sheaths of old basal leaves clothing the base of the new, lacerate, about an inch long; ligule long, linear, membranous. *Panicle* broad, rachis and few distant branches quite smooth. *Spikelets* pale purplish, gl. I and II membranous, 1-nerved, keels scaberulous; III hyaline, 5-nerved, hairy, awn twice as long as the spikelet; palea very minute, suborbicular.

I have seen only one poor specimen of this curious species, which should at once be recognized by its rootstock, and the slender rigid petioles of the leaves, long ligule, and tufted lacerate old leaf-sheaths about an inch long, crowning the rootstock. There is, however, in Herb. Kew a specimen of what may be the same species collected by Clarke at Conoor (in the Nilghiris) alt. 7000 ft., with a very slender stem 2–3 ft. long, and narrow flat sessile cauline leaves with a short ligule; its spikelets quite accord with those of *C. Schmidii*, but the base of the stem and lower leaves are wanting.

12. **C. Jacquemontii**, *Hook. f.*; tall, slender, leaves very narrow, ligule oblong, panicle narrow drooping, branches erect naked below, spikelets few $\frac{1}{5}$–$\frac{1}{4}$ in. long-pedicelled erect, gl. I and II subequal lanceolate sub 3-nerved, III = about $\frac{1}{2}$ II tip truncate 4-toothed, awn supra-basal exserted, palea minute, callus hairs = $\frac{1}{2}$ gl. III, anthers long.

KASHMIR; moist places on the Pyr Panjal, *Jacquemont* (n. 97).

Stems apparently tufted, 18 in. high, geniculate below. *Leaves* 5–6 by $\frac{1}{8}$ in., scaberulous; sheaths quite smooth; ligule oblong. *Panicle* 4–5 in., lower branches fascicled, 1–1$\frac{1}{2}$ in., scaberulous. *Spikelets* pale yellowish; keels of gl. I and II smooth, III hairy all over.—I have seen only two specimens. The long spikelets distinguish it. This approaches var. *ciliata* of *C. pilosula*, but the spikelets are considerably larger.

DOUBTFUL SPECIES.

C. HOOKERIANA, *Steud. Syn. Gram.* 292. Lachnagrostis Hookeriana, *Nees ex Steud.* A Ceylon plant described as having the palea as long as its gl. which occurs in no Ceylon specimen of the genus known to me.

C. ROYLEANA, *Steud. Nom. Ed.* II. i. 251. C. Roylei, *Steud. Syn. Gram.* 193. Agrostis Royleana, *Trin. in Act. Acad. Petersb. Ser.* VI. vi. *Sc. Nat.* II. (1845) 371. Lachnagrostis Royleana, *Nees in Herb. Royle ex Steud. Nom. l. c.* L. Hookeri, *Nees ex Steud. Syn. l. c.*—Trinius founded this species on three plants, an Indian of Royle, a Nilghiri of Zenker, and a Ceylon one from "Herb. Whytt." One of his characters is the presence of a "bearded rudiment," which refers the plant to *Deyeuxia.* I know of no *Deyeuxia* in Ceylon or the Nilghiris.

75. **DEYEUXIA**, *Clar.*

Characters of *Calamagrostis*, but with the rachilla of the spikelet produced beyond gl. III and usually penicillate with silky hairs; gl. III glabrous; hairs of callus usually short.—Species enumerated about 120.

See remarks under *Agrostis* (p. 253). In *D. Treutleri* the produced portion of the rachilla is most minute and naked, in *D. abnormis* it is awnless and the rachilla is very minute or absent, but the hairs of the callus are more or less crowded at the base of the palea.

A. Rachilla bearded or penicillate.

* *Awn of glume III basal or subbasal.*

1. **D. sylvatica,** *Kunth Revis. Gram.* i. 77, *Enum. Pl.* i. 243, *Suppl.* 188, t. xiv. f. 5; tall, leaves long scabrid beneath, panicle contracted at length open, spikelets $\frac{1}{6}$ in., gl. I and II subequal ovate-lanceolate, III rather shorter than I tip shortly lacerate, callus loosely bearded, awn about twice as long as its gl., palea rather shorter than its gl., rachilla shortly bearded. Calamagrostis sylvatica, *DC. Fl. Fr.* v. 253; *Host Gram. Austr.* iv. 28, t. 48; *Trin. Gram. Unifl.* 223, t. 4; *Reichb. Ic. Fl. Germ.* t. 38; *Ledeb. Fl. Ross.* iv. 427; *Boiss. Fl. Orient.* v. 526. C. arundinacea, *Roth. Tent. Fl. Germ.* i. 33. C. pyramidalis, *Host l. c.* 28, t. 49; *Reichb. l. c.* Arundo sylvatica, *Schrad. Fl. Germ.* i. 218, t. 4, f. 7. Agrostis arundinacea, *Linn. Pl. Sp.* 61.

WESTERN HIMALAYA; Kunawur, alt. 8000 ft., *Thomson;* Kashmir, alt. 10–11,000 ft., *Duthie.*—DISTRIB. Europe, Reg. Caucas.

Stem 3–5 ft., from a creeping base. *Leaves* linear, 1–2 ft. by $\frac{1}{4}$–$\frac{1}{2}$ in., finely acuminate; ligule short. *Panicle* erect or drooping; branches short, scabrid. *Spikelets* green or purplish; gl. I 1-nerved; II 3-nerved; awn of III shortly exserted.—I have seen only two Indian specimens, which I think belong to *D. sylvatica*, Kunth, one from Thomson, with a very large panicle 16 in. long has the callus hairs scanty, about $\frac{1}{3}$ the length of the gl., the other from Duthie has a shorter panicle, a much shorter rachilla, and the callus hairs are more copious and twice as long. I do not venture upon further citations than are given above, the synonymy of both *Deyeuxia* and *Calamagrostis* being in great confusion.

2. **D. elatior,** *Hook. f.*; very tall, stout, leaves long, panicle 1–2 ft. pyramidal branches long spreading, spikelets $\frac{1}{6}$ in., gl. I and II subequal lanceolate acuminate, III rather shorter than II tip truncate erose, callus laxly bearded, palea rather shorter than its gl., awn exserted, rachilla very short its hairs about half the length of the gl. or longer. Calamagrostis scabrescens, var. elatior, *Griseb. in Goett. Nachr.* (1868) 79.—Deyeuxia, *No.* 7, *Herb. Ind. Or. Hf. & T.*

KHASIA HILLS, alt. 5–5500 ft., *Griffith*, &c.

Stem 5–6 ft., as thick as a swan's quill below. *Leaves* 2–3 ft. by $\frac{1}{3}$–$\frac{2}{3}$ in., coriaceous, closely nerved, midrib prominent beneath, glabrous or hairy beneath; sheaths hirsute or glabrescent; ligule short, scarious. *Panicle* 4–8 in. broad when expanded; branches scabrid, lower fascicled. *Spikelets* subscaberulous; gl. I and II thin, keels and upper margin of II scabrid; III membranous, callus hairs sometimes = the gl.; awn subbasal, twice as long as its gl. *Grain* linear-oblong.—Grisebach in reducing this to a variety of *D. scabrescens*, has overlooked the great difference in size and habit, and the different position of the awn which is subbasal.

3. **D. triaristata,** *Hook. f.*; very slender, leaves narrow, panicle flexuous contracted, rachis and branches capillary, spikelets $\frac{1}{4}$ in. few, gl. I and II subequal narrowly lanceolate, III $\frac{1}{4}$ shorter than I truncate, two lateral nerves produced into long awns, two intermediate mucros, median awn exserted, palea $= \frac{1}{2}$ its gl., hairs of callus $= \frac{1}{4}$ gl. III.

SIKKIM HIMALAYA; in woods, Yeumtong, alt. 12,000 ft., *J. D. H.*

Stem 12–18 in., geniculately ascending from a slender creeping base, weak. *Leaves* 6–8 in., narrowly linear, finely acuminate, smooth, flaccid; ligule short. *Panicle* 5–6 in.; branches few, lower 2–3 in. long, and pedicels smooth. *Spikelets* pale green, shining; gl. I and II quite smooth on the sides and keels; III hyaline, lateral awns more than half as long as the gl., dorsal awn inserted ¼ above the base capillary, about twice the length of the gl.; rachilla short; callus hairs scanty short.

4. **D. compacta**, *Munro ex Duthie Grass. N.W. Ind.* 30 (*name only*); stem short, leaves very narrow, panicle open or spiciform, spikelets ⅙ in., gl. I and II subequal oblong-lanceolate apiculate, III truncate tip erose, palea nearly as long as its gl., awn basal, hairs of callus short. ?Calamagrostis holciformis, *Jaub. & Spach. Ill. Pl. Orient.* iii. 61, t. 340.

WESTERN TIBET, *Jacquemont*; Nubra valley, alt. 14–16,000 ft., *Thomson*; N. of Kumaon, alt. 15,000 ft., *Strachey & Winterb.* (Deyeuxia, No. 1).

Stems 6–18 in., densely tufted, rather stout, sometimes slender. *Leaves* 1–3 in., flat or convolute; ligule short. *Panicle* 1–2 in., branches very short, scaberulous. *Spikelets* purplish; gl. I and II membranous, nearly smooth; III ¼–⅓ shorter than II, minutely scaberulous, strongly 4-nerved, callus hairs short lax.—In Jacquemont's and all other specimens in Herb. Kew, the panicle is oblong spiciform, with very short branches, and not as represented in the figure cited of *Calamagrostis holciformis* which is taken from a specimen collected by Jacquemont and in which the panicle is quite open. The glumes I and II are represented in the same plate as narrowly lanceolate tapering to a point, and scabrid, none of which characters agree with these specimens. Lastly, the date of collection is given as 1830, and that of the Kew specimen 1831. Nevertheless having regard to the great variability of these alpine grasses, I am disposed to think both referable to one species.

5. **D. nivicola**, *Hook. f.*; stem short, leaves obtuse or acute, panicle contracted spiciform, branches very short, spikelets ¼ in. very narrow, gls. I and II unequal lanceolate smooth, III truncate tip 4-mucronate, palea nearly = the gl., awn included? rachilla half as long as the gl. shortly plumose, callus shortly bearded. Deyeuxia n. 4, *Herb. Ind. Or. Hf. & T.*

SIKKIM HIMALAYA; Momay, alt. 15,000 ft., *J. D. H.*

Stem 5–7 in., densely tufted, erect or ascending, stout. *Leaves* as long as the stem or shorter, flat or subconvolute, ⅒–⅙ in. broad; ligule short, truncate. *Panicle* 1–1⅓ in., strict, erect, green and purplish. *Spikelets* erect, appressed; gl. I about ⅙ longer than II, both 1-nerved, acuminate; III about half as long as I, hardly scaberulous, nerves 4, strong; awn basal, not twice as long as the gl., erect.

** *Awn of gl. III inserted above the middle of the glume* (*awn* 0 *in* D. abnormis *and rachilla very minute or obsolete*).

6. **D. scabrescens**, *Munro ex Duthie in Atkins. Gaz. N.W. Ind.* 628; tall, stout, leaves long, panicle long contracted, spikelets ⅙–¼ in., glumes all scaberulous, I and II subequal 1-nerved, III tip narrowed obtuse truncate crenulate or 2-fid, awn submedian, palea linear, callus shortly bearded. *Duthie Grass. N.W. Ind.* 31; *Clarke in Journ. Linn. Soc.* xxv. (1889) 89, t. 39. Calamagrostis scabrescens, *Griseb. in Goett. Nachr.* (1868) 79.

TEMPERATE HIMALAYA, alt. 10–13,000 ft., from Kashmir to Bhotan. MUNNEPORE, alt. 9900 ft., *Clarke*.

Stem 2–5 ft. *Leaves* 6–18 by ⅛–⅓ in., flat or convolute, scaberulous; sheath smooth; ligule membranous, lacerate. *Panicle* 6–10 in., erect or inclined, dense-fld., branches scaberulous; pedicels long or short. *Spikelets* green or purplish; gl. I and II linear-lanceolate, acuminate, margins smooth or villously ciliate; III scarious, tip usually 2-fid, awn inserted rather above the middle about twice as long as the gl., slightly bent, rachilla = ⅓–½ gl. III, sparingly or copiously bearded.

Grain narrowly oblong.—I do not find the awn to be twisted,.as in the description cited, and it is inserted lower than in the figure in the Linnæan Journal.

Var. *humilis*, Griseb. l. c.; smaller, stems weaker, leaves $\frac{1}{10}$–$\frac{1}{6}$ in. broad, panicle small lax-fld., spikelets green, gl. III hardly scaberulous, palea shorter. Deyeuxia No. 2, *Herb. Ind. Or. Hf. & T.*—Sikkim Himalaya; Lachen Valley, alt. 11–12,000 ft., *J. D. H.*

7. **D. filiformis,** *Hook. f.*; stem very slender, leaves short, panicle short, spikelets $\frac{1}{8}$ in., gl. I and II subequal subscaberulous, II 3-nerved, III hyaline asperulous, tip truncate 4-cleft, awn capillary submedian exserted palea = $\frac{1}{2}$–$\frac{3}{4}$ its gl., hairs of rachilla about = the gl., hairs of callus short. Calamagrostis filiformis, *Griseb. in Goett. Nachr.* (1868) 79.

SIKKIM HIMALAYA; Lachen Valley, alt. 10–12,000 ft., *J. D. H.*

Stem 12–18 in., terete, tufted. *Leaves* 2–4 in., narrow, nearly smooth; ligule membranous. *Panicle* 2–3 in. long and nearly as broad, pyramidal; branches few, very slender, nearly smooth. *Spikelets* shortly pedicelled, pale purplish; gl. I and II sometimes both 3-nerved; III strongly 4-nerved, irregularly 4-cleft at the apex, the lobes almost setaceous; awn inserted a little above the middle of the back.

8. **D. pulchella,** *Hook. f.*; stem short stout, panicle 1–2 in. oblong or ovate, spikelets $\frac{1}{6}$ in. crowded dark purple, gl. I and II scaberulous finely acuminate, III scaberulous irregularly 4-toothed or sub 4-aristate, awn supra-median to sub-apical included, palea $\frac{1}{3}$–$1\frac{1}{2}$ as long as its gl., rachilla densely penicillate hairs = gl. III, callus shortly bearded. Calamagrostis pulchella, *Griseb. in Goett. Nachr.* (1868) 78.

ALPINE and SUBALPINE HIMALAYA; from Kumaon and Garwhal, alt. 10–15,000 ft., to Sikkim, alt. 14–16,000 ft.—DISTRIB. Tibet. W. Szechuen, *Pratt.*

Stems densely tufted, strict, erect. *Leaves* 3–5 in., rarely more, $\frac{1}{10}$–$\frac{1}{8}$ in. broad, smooth or scaberulous, usually flat; ligule short, membranous. *Panicle* variable in size and form; branches minutely scabrid, sometimes elongate and spreading. *Spikelets* smaller than in *D. scabrescens* and not so strongly scaberulous, I and II rather unequal; III split at the tip into almost setiform lobes; insertion of awn most variable, but never quite terminal, capillary, as long as its gl. or shorter.—A very variable plant; the N.W. specimens have large looser more open panicles than the Sikkim. In one specimen from Garwhal, alt. 10–13,000 ft. (No. 143 and 245 Duthie) the panicle is very open) and I find occasionally a gl. terminating the rachilla.

9. **D. abnormis,** *Hook. f.*; tall, leaves narrow flat, panicle broad or narrow, branches in distant whorls of 3–6 divided and flg. toward the ends, spikelets $\frac{1}{12}$–$\frac{1}{10}$ in. long-pedicelled, gls. I and II subequal oblong-lanceolate acute, III rather shorter than I tip narrowly truncate crenulate, awn 0, palea = about $\frac{1}{2}$ its gl., rachilla very minute or obsolete, callus hairs = $\frac{1}{4}$–$\frac{1}{2}$ the gl. Agrostis abnormis, *Munro Cat. Pl. Griff. Helfer*, &c., 57, *ined.* Calamagrostis capillacea, *Clarke mss.*—Agrostis No. 11 & 12, *Herb. Ind. Or. Hf. & T.*

SIKKIM HIMALAYA; Lachoong Valley, alt. 9000 ft., *J. D. H.* KHASIA HILLS, alt. 5–5500 ft., common, *Griffith*, &c.

Stem 6–18 in., densely tufted, erect strict and slender with a narrow panicle, or rambling with stout branching stems 3-4 ft. long and a very effuse panicle; upper internodes sometimes scaberulous. *Leaves* 6–8 by $\frac{1}{6}$–$\frac{1}{4}$ in., rather rigid, scaberulous, as are the sheaths; ligule short, rounded. *Panicle* 4–6 in., rachis very slender strict; branches and branchlets capillary, quite smooth. *Spikelets* pale brown; gl.

I and II 1-nerved; III glabrous, nerves faint; hairs of callus longest under the palea.—Resembles *Agrostis alba*, from which the long callus hairs at once distinguish it.

B. Rachilla minute, glabrous; callus hairs very short.

10. **D. Treutleri,** *Stapf in Hook. Ic. Plant.* t. 2396; tall, slender, panicle elongate lax-fld., spikelets $\frac{1}{12}$–$\frac{1}{10}$ in., gl. I and II very unequal lanceolate subacute scaberulous, III longer than II coriaceous obtuse scaberulous, palea as long as the gl., rachilla very small styliform, callus minutely hairy. Milium Treutleri, *O. Kuntze Rev. Gen. Plant.* 780 (*partim*).

SIKKIM HIMALAYA, alt. 7–12,000 ft., in woods, *J. D. H.*, *Treutler*, *Clarke*.

Stem 2–4 ft., leafy nearly to the top. *Leaves* 8–10 by $\frac{1}{4}$–$\frac{1}{2}$ in., linear-lanceolate, acuminate, flaccid, scaberulous beneath; ligule oblong. *Panicle* ovate, flaccid, at length rigid, scaberulous; branches in distant whorls. *Spikelets* narrowly ovoid, pale; gl. I ovate-lanceolate, acute, 1-nerved; II longer, subacute, 1-nerved; III longer than II, laterally compressed, keeled; palea about as long as the gl. *Grain* oblong, laterally compressed, tightly wrapped in the gl. and palea.—A very anomalous species.

Tribe VII. AVENEÆ. (See p. 6.)

76. ERIACHNE, *Br.*

Rigid, densely tufted grasses. *Leaves* filiform, convolute. *Spikelets* few, 2-fld. (both fl. perfect), not jointed on their long pedicels; rachilla jointed at the base, not produced beyond gl. IV. *Glumes* 4, I and II empty, subequal, persistent, keeled, many-nerved; III and IV subequal, narrow, at length rigid, awned or not; palea rigidly coriaceous, 2-cuspidate or 2-aristate, nerves obscure. *Lodicules* 2, oblong, truncate. *Stamens* 2–3. *Styles* free, stigmas plumose. *Grain* free within the rigid gl. and palea.—Species about 22 Australian, and 2 Asiatic.

1. **E. triseta,** *Nees ex Steud. Syn. Gram.* 237; gl. I and II linear-lanceolate, III and IV long-awned, palea long-awned. *Trim. Cat. Ceyl. Pl.* 108; *Steud. Syn. Gram.* 237. Megalachne zeylanica, *Thwaites Enum. Pl. Zeyl.* 372, 444.

TENASSERIM; Mergui, *Griffith*, *Helfer*. CEYLON; Colombo, *Thwaites*.

Stems 1½–2 ft., slender, erect, branched below. *Leaves* 3-nerved; ligule very short, ciliate. *Panicle* 2–4 in. *Spikelets* with the awns $\frac{1}{2}$–$\frac{2}{3}$ in. long, purple; gl. I and II subaristate, glabrous; III and IV narrow, silky; callus long.

2. **E. pallescens,** *Br. Prodr.* 184; gl. I and II ovate acuminate, III, IV, and palea bicuspidate. *Kunth Enum. Pl.* i. 310; *Steud. Syn. Gram.* 237. *Benth. Fl. Austral.* vii. 630. E. chinensis, *Hance in Ann. Sc. Nat. Ser.* IV. xv. (1861) 228, *in Journ. Linn. Soc.* xiii. (1873) 136. E. Hookeri, *Munro in Journ. Linn. Soc.* vi. (1862) 42, *name.* Aira effusa, *Spreng. Syst.* i. 278.

CHITTAGONG, *J. D. H.* & *T. T.* PAHANG, *Ridley*. NICOBAR ISLDS., *Kurz*.—DISTRIB. Borneo, Tonkin, China, Australia.

Stem 1–2 ft. *Leaves* glabrous or slightly hairy. *Panicle* very lax. *Spikelets* with the awns $\frac{1}{4}$ in.; gl. I and II slightly hairy; III and IV narrow and palea villously hirsute, awns of III and IV about = the gl., of palea very short.—Bentham describes the palea as entire, but in the Indian specimens they terminate in two short rigid spines.

77. ZENKERIA, *Trin.*

Tall, perennial, long-leaved grasses. *Spikelets* small, panicled, 2-fld. (both fl. perfect), not jointed on their pedicels; rachilla jointed at the hairy base, not produced beyond gl. IV. *Glumes* 4, I and II empty, subequal or unequal, 1-nerved, keeled, acute, persistent; III and IV equal, obtuse or acuminate, many-nerved; palea as long as its gl., broad, keels strongly ciliate or hirsute. *Lodicules* 2, ovate, denticulate. *Stamens* 3. *Styles* short, distinct. *Grain* unknown.—Species the following.

1. **Z. elegans,** *Trin. in Linnæa,* xi. (1837) 150, t. 3; leaves long narrow, panicle thyrsiform, branches erect, gl. I and II unequal, III and IV acuminate much longer than II. *Trim. Cat. Ceyl. Pl.* 108. Amphidonax Heynii, *Nees in Wight Cat.* n. 1747; *Steud. Syn. Gram.* 97; *Thwaites Enum. Pl. Zeyl.* 370. A. tenella, *Wight & Arn. ex Steud. l. c.*—Pappophorum? *Wall. Cat.* n. 8903.

SOUTHERN DECCAN PENINSULA, *Heyne,* &c. BURMA, *Kurz.* CEYLON, *Thwaites,* &c.

Stem 2–3 ft., as thick as a crow-quill, rigid, base woody. *Leaves* as long as the stem or longer, strict, coriaceous, convolute, rarely flat, glabrous or sparsely hairy; sheaths coriaceous; ligule rounded. *Panicle* 6–8 in.; rachis flexuous; branches filiform, smooth. *Spikelets* $\frac{1}{10}$–$\frac{1}{8}$ in., pedicelled, white; gl. I and II ovate, hyaline, 1-nerved; I shortest, midrib very strong, excurrent; III and IV lanceolate, sparsely villous, 7–9-nerved; IV longest and most acuminate; callus bearded with long straight hairs; palea as broad as the gls., hirsute. *Anthers* long, narrow.

2. **Z. obtusiflora,** *Benth. in Journ. Linn. Soc.* xix. (1881) 93; leaves broadly linear-lanceolate narrowed at both ends, panicle pyramidal, branches widely spreading, gl. I and II unequal or subequal, III and IV obtuse not longer than II. *Trim. Cat. Ceyl. Pl.* 108. Amphidonax obtusiflora, *Thwaites Enum. Pl. Zeyl.* 370.

CEYLON; at Ratnapoora, *Thwaites.*

Stems 3–5 ft., glabrous. *Leaves* 2 ft. by $\frac{3}{4}$–1 in., acuminate, pungent, glabrous, coriaceous; ligule very short, densely hairy. *Panicle* 6–8 in.; branches capillary, solitary or 2-nate; pedicels longer than the spikelets, with a glandular callus at the base. *Spikelets* $\frac{1}{12}$–$\frac{1}{10}$ in., as broad as long; gl. I and II ovate, apiculate by the strong excurrent nerve, glabrous; III and IV rather longer, sides and callus villous; palea as in *Z. elegans.*

78. COELACHNE, *Br.*

A small leafy very variable marsh grass. *Leaves* short, flat or convolute. *Spikelets* 2-fld. (both fl. perfect or upper imperfect) in open or contracted or spiciform panicles, not jointed on the pedicels, not awned; rachilla jointed at the base, produced between gl. III and IV but not beyond IV. *Glumes* I and II broad, concave, obtuse, persistent, empty, I the largest; III much longer, subsessile, coriaceous, glabrous, except the shortly bearded callus; palea as long, coriaceous; IV much smaller and palea more or less hairy. *Lodicules* 0? *Stamens* 3; anthers long, narrow. *Ovary* ovoid, stigmas free. *Grain* free within the gl. and palea.

C. pulchella, *Br. Prodr.* 187.

NEPAL, *Wallich,* KHASIA and MUNNEPORE HILLS, alt. 4–6000 ft., BURMA, CENTRAL and SOUTHERN INDIA, and CEYLON.—DISTRIB. Trop. Asia, Australia, and Madagascar.

Stem 6–18 in., flaccid, decumbent or ascending, slender or rather stout, leafy up to the panicle. *Leaves* uniform throughout the stem, $\frac{1}{2}$–1 in., lanceolate, subulate, acuminate, distant or subequitantly sheathing, ecostate, minutely scaberulous above, nerves striate; ligule a few hairs. *Panicle* very various. *Spikelets* $\frac{1}{20}$–$\frac{1}{10}$ in., sessile or pedicelled, globose or ovoid; gl. I and II suborbicular or hemispheric, many-nerved, membranous or herbaceous; III hermaphrodite, coriaceous, dorsally rounded, nerves 0 or very obscure; palea coriaceous, margins incurved; IV much the smallest, often imperfect, neuter or fem.—After a long study of a multitude of specimens from all the countries mentioned above, I conclude that there is but one known species of this genus. If there are two, the second is one to include vars. *gracillima* and *perpusilla*, in which case the latter name would be very inappropriate for both.

Var. *pulchella* proper; stems filiform decumbent and ascending, leaves lanceolate flat, panicle with distant spreading filiform branches, spikelets $\frac{1}{20}$–$\frac{1}{18}$ in. subglobose, gl. I and II hemispheric, III broadly ovoid, IV faintly hairy or glabrous. C. pulchella, *Br. l. c.*; *Endl. Iconogr.* t. 2; *Kunth Revis. Gram.* ii. t. 143, *Enum. Pl.* i. 371; *Steud. Syn. Gram.* 284; *Benth. Fl. Austral.* vi. 626. Gramin, *Wall. Cat.* n. 8909.—Burma; source of the Chappedong River, *Wallich.* Australia.

Var. *brachiata*, Munro in Herb. Kew; stem stout or slender suberect or ascending, panicle 2–4 in. long, branches shorter than in *pulchella* proper, spikelets $\frac{1}{20}$–$\frac{1}{15}$ in. like those of *pulchella* proper but sessile. C. brachiata, *Munro ex Benth. Fl. Austral.* vii. 626 (*partim*).—Tenasserim, *Griffith* (*Kew Distrib.* 6675) *Helfer.*

Var. *simpliciuscula*; stem suberect or creeping and rooting rather stout, leaves flat, panicle elongate narrow, branches short stiff, spikelets $\frac{1}{15}$ in. ovoid sessile crowded on the branches or in fascicles on the main rachis, gl. I and II unequal, III ovate-lanceolate. C. simpliciuscula, *Munro ex Benth. in Journ. Linn. Soc.* xix. (1881) 93, *Fl. Austral.* vii. 626. C. infirma, *Buese Pl. Jungh.* i. 350; *Miq. Fl. Ind. Bat.* iii. 399. C. pulchella, *Thw. Enum.* 273; *Benth. Fl. Hongk.* 430. C. brachiata, *Trim. Cat. Ceyl. Pl.* 108. C. madagascariensis, *Baker, in Journ. Linn. Soc.* xxv. (1890) 348. Isachne brachyglumis, *Hochst. in Hohen. Pl. Nilgh.* n. 1283 (*name*). Panicum simpliciusculum, *Wight & Arn. ex Steud. Syn. Gram.* 96.—Khasia and Naga Hills, alt. 4–5000 ft. *J. D. H. & T. T.*, *Clarke.* Nilghiri Hills, *Wight*, &c. Ceylon, *Walker*, *Thwaites* (CP. 884).—Java, Tonkin, China, Madagascar.—Intermediate between *brachiata* and *spicata.*

Var. *spicata*; stem short stout suberect, leaves flat, spikelets $\frac{1}{20}$–$\frac{1}{16}$ in. ovoid in dense spiciform panicles subsessile, gl. I and II orbicular subequal membranous, III broadly ovate.—Nepal, *Wallich* (Cat. n. 8908). Chota Nagpore, *Clarke.* S. India, *Wight* (*Herb.* n. 3376).—China.

Var. *gracillima*, stems 6–12 in. capillary or filiform, leaves flat, panicle very slender, branches short spreading, spikelets few $\frac{1}{16}$–$\frac{1}{10}$ in. pedicelled, gl. I and II very unequal, III and IV lanceolate. C. perpusilla, *Thw. Enum.* 373 (*in part*).—Nilghiri Hills, *Schmid.* Ceylon, Adam's Peak and Newera Elia, in swamps, *Thwaites* (C.P. 130).

Var. *perpusilla*, stems capillary densely tufted, leaves filiform, panicles as in *gracillima* but with fewer branches and spikelets. C. perpusilla, *Thw. l. c. in part* (C.P. 450). Trim. l. c. (*in part*). Isachne perpusilla, *Wight & Arn. ex Wight Cat.* n. 2043.—Ceylon, *Walker*, Adam's Peak, *Thwaites.*

Var. *Gardneri*; stem 12–18 in. stout flexuous, clothed throughout with subulate-lanceolate erect sheathing leaves, panicle stiff with few short spreading branches, spikelets $\frac{1}{12}$–$\frac{1}{10}$ in. sessile, gl. I and II subequal, III ovate.—Ceylon, *Gardner* (n. 1018, 1019).

79. **TRISTACHYA**, *Nees.*

Perennial grasses. *Leaves* various. *Spikelets* 2-fld. (lower fl. male upper fem. or perfect), panicled, not jointed on their pedicels; rachilla villous, produced between gl. II and III but not beyond IV, jointed at the base. *Glumes* 4; I and II unequal, not awned, persistent, empty, lanceolate, acuminate, glabrous; III lanceolate, acuminate, membranous, awn 0; IV deeply 2-fid with a long twisted awn in the sinus (copiously bearded above the middle in the Indian sp.); palea narrow, acute. *Lodicules* minute, cuneate, fleshy. *Anthers* long. *Styles* long, slender. *Grain* narrow, free.—Species 8, chiefly tropical.

T. barbata, *Nees ex Steud. Syn. Gram.* 238; *Boiss. Fl. Orient.* v. 552; *Duthie Grass. N.W. Ind.* 32. T. Stocksii, *Boiss. l. c.*; *Munro in Aitchis. Cat. Panjab. Pl.* 168; *Duthie Fodd. Grass. N. Ind.* 51. Loudetia barbata, *A. Braun in Flora*, xxiv. (1841) ii. 714. Sorghum barbatum, *Hochst. et Steud. Pl. Arab. Exsicc.* n. 788.

SCIND; *Stocks.*—DISTRIB. Arabia, Nubia.

Stem 6–18 in. branched and woody below, geniculately ascending, base clothed with tomentose sheaths, slender and wiry above; nodes bearded. *Leaves* 1–3 in., lanceolate from a rounded base, finely acuminate, pungent, rigid, glaucous, many-nerved, margin thickened subserrulate; sheaths smooth; ligule 0. *Panicle* sparingly branched, 1–2 in. long and broad; branches solitary and 2-nate, capillary, flexuous, subscaberulous, branchlets 1–3-fid. *Spikelets* ½ in., pale yellowish; gl. I and II 3-nerved, II ¼–⅓ longer than I; III much longer than I, interruptedly 7-nerved, and its callus glabrous; IV with a very short broad lamina, margins involute, lateral lobes lanceolate, aristate, 3-nerved, rather longer than the hairs; median awn about twice as long as the gl.—I find no character for *T. Stocksii.*

80. AIRA, *Linn.*

Annual or perennial grasses. *Leaves* narrow. *Spikelets* 2-fld. (both fl. perfect) panicled, branches capillary; rachilla jointed at the base, not produced beyond gl. IV. *Glumes* 4, hyaline; I and II subequal, 3-nerved, acute, empty, persistent; III and IV smaller, often 2-toothed; awn dorsal, capillary, usually twisted below; callus naked; palea hyaline, 2-nerved. *Lodicules* 2. *Anthers* small. *Grain* minute, free or adhering to the hyaline gl.—Species 4 or 5, Europe and temp. Asia.

A. caryophyllea, *Linn. Sp. Pl.* 66; annual, very slender, leaves setaceous, ligule lanceolate, panicle broad erect capillary trichotomously branched, spikelets long-pedicelled. *Kunth Enum. Pl.* i. 289, *Suppl.* 241, t. 18, f. 2; *Fl. Dan.* t. 382; *Lamk. Encycl.* t. 44; *Host Gram. Austr.* ii. 33, t. 44; *Svensk. Bot.* t. 508; *Reichb. Ic. Fl. Germ.* t. 94; *Engl. Bot.* t. 812; *Knapp Gram. Britt.* t. 35; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 44; *Steud. Syn. Gram.* 221; *Ledeb. Fl. Ross.* iv. 424; *Boiss. Fl. Orient.* v. 529; *Duthie Grass. N.W. Ind.* 31. A. canescens, *Host l. c.* iv. 21, t. 36. A. Cupaniana, *Guss Fl. Sic. Syn.* i. 145. A. curta, patulipes & plesiantha, *Jord. ex Bor. Fl. Centr. Fr. Ed.* III. ii. 701. A. divaricata, *Pourr. in Mem. Acad. Toul.* iii. (1788) 307. A. multiculmis, (multicaulis, *Kunth*), *Dumort. Agrost. Tent.* 121, t. 7, f. 28. A. purpureo-argentea, *Gilib. Exercit.* ii. 526. A. rigida, *Dulac Fl. Haute-Pyren.* 82. A. Todari, *Tenore ex Tod. Ind. Sem. Hort. Panorm.* 1859; *Linnæa*, xxx. (1859) 788. A. triaristata, *Clarke Trav.* ii. 452. Avena caryophyllea, *Weber in Wigg. Prim. Fl. Hols.* 10. Fussia caryophylla, *Schur Enum. Pl. Transs.* 754.

N.W. HIMALAYA; Kashmir, *Vicary*, *Stewart*, Kohat, and Lahul, *Hay*, &c. WESTERN TIBET, alt. 12,000 ft., *Stolizka.*—DISTRIB. N. Africa, temp. Asia (introd. elsewhere).

Stems 2–10 in., tufted, filiform, scabrid above. *Leaves* obtuse and sheaths scabrid, ligule long. *Panicle* 1–2 in. long and broad. *Spikelets* $\frac{1}{12}$–$\frac{1}{10}$ in., ovoid, shining, gl. I and II ovate, exceeding II and III, keels scabrid; tips of flg. gls. 2-setose; awn twice as long as the gls., bent.

81. **DESCHAMPSIA,** *Beauv.*

Perennial grasses. *Leaves* flat or convolute. *Spikelets* 2- (rarely 3-) fld. (both fl. perfect) panicled, not jointed on their pedicels; rachilla jointed at the base, produced beyond gl. IV as a naked or penicillate stipes rarely bearing a male fl. Glumes 4; I and II empty, subequal, or II largest, persistent, keeled, acute, membranous, shining; III and IV subhyaline, tip toothed or lobed; awn dorsal, slender, straight or twisted; palea narrow, 2-nerved. *Lodicules* ovate, fleshy. *Stamens* 3. *Styles* distinct. *Grain* oblong, free within the gl.—Species about 20, of temp. regions.

1. **D. cæspitosa,** *Beauv. Agrost.* 91, t. 18, f. 3; stem short or tall, panicle effuse or contracted, spikelets variable in size, gl. I and II ovate-lanceolate acute subequal or II rather longer, IV hardly exceeding II, awn about equalling the gl., straight not twisted. *Kunth Enum. Pl.* i. 286, *Suppl.* 241; *Ledeb. Fl. Ross.* iv. 421; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 43; *Boiss. Fl. Orient.* v. 531; *Benth. Fl. Austral.* vii. 587; *Hook. f. Fl. Nov. Zel.* i. 301; *Duthie Grass. N.W. Ind.* 31. Aira cæspitosa, *Linn. Sp. Pl.* 64; *Fl. Dan.* ii. t. 240; *Engl. Bot.* t. 1453; *Knapp Gram. Britt.* t. 33; *Trin. Sp. Gram. Ic.* t. 253, 256; *Reichb. Ic. Fl. Germ.* t. 96. A. Kingii, *Hook. f. Fl. Antarct.* 376, t. 135. A. major, *Syme Engl. Bot. Ed.* III. xi. 63. A. micans, *Jacquem. mss.* Triodia splendida, *Steud. Syn. Gram.* 249.—Deschampsia, *Wall. Cat.* n. 3802; Gramin. *Wall. l. c.* n. 8911.

TEMPERATE and ALPINE HIMALAYA and WESTERN TIBET, in swamps from Kashmir to Bhotan, alt. 10–16,500 ft.—DISTRIB. N. and S. temp. and cold regions.

Stem 6 in. to nearly 3 feet high, stout or slender, smooth, shining, leafy upwards or in small states at the base chiefly. *Leaves* short or long, flat, rather softly coriaceous, quite smooth; sheaths smooth, upper very long; ligule obtuse. *Panicle* 4–8 in., short dense-fld. and erect, or lax-fld. effuse and inclined, sparingly branched; branches and pedicels capillary, smooth or minutely sparsely scaberulous. *Spikelets* $\frac{1}{7}$–$\frac{1}{6}$ in., white and silvery or fulvous purplish; rachilla slender, hairy; gl. I and II concave, subacute, nerveless, or II which is broadest sub-3-nerved; III and IV truncate, erose, crenate or irregularly toothed, callus silkily hairy; awn dorsal, subbasal.—I have not attempted to give all the synonymy of this almost cosmopolitan (in temperate regions) and very variable plant which, I think, includes fully a dozen supposed species of the N. temperate and Arctic zones. Wallich's n. 8911 "Aira coerulea, *Hb. Madr.*" was long a puzzle to me. It is accompanied with the ticket "Aira coerulea, Blå tå tel," which latter word Dr. Stapf recognized as the Swedish for *Molinia coerulea.* No doubt the specimen, which is of *Deschampsia cæspitosa,* is a Swedish one, and was introduced by accident into the Madras Herbarium.

Var. *colorata,* Griseb. Spicil. Fl. Rumel. ii. 457; stem short strict 4–6 in., leaves short basal, panicle small broadly ovate dense-fld., pedicels and branchlets very short, spikelets dark bronzy-yellow, sometimes 3-fld., *Boiss. l. c.* D. Bieber-steinianus, *Sch. f. Mant.* ii. 380. D. brevifolia, *Br. in Parry Voy. App.* 191. Aira brevifolia, *Bieb. Fl. Taur. Cauc.* iii. 63. A. triflora, *Trin. in Flora,* i. (1836) 433. A. Wilhelmsii, *Steud. Syn. Gram.* 219.—Western Tibet; Balch Pass, alt. 16,500 ft., *Strach. & Winterb.* Sikkim, alt. 14–16,000 ft., *J. D. H.*

2. **D. kœlerioides,** *Regel in Bull. Soc. Nat. Mosc.* xli. (1868) 299; stem short, leaves basal linear erect, panicle short ovoid or subspiciform,

spikelets very shortly pedicelled imbricating brownish-yellow, gls. III and IV broad more or less 2-lobed lobes irregularly toothed.

Kashmir and Baltistan, Dras, and Iskardo, alt. 10–14,500 ft., *Clarke Duthie.*—Distrib. Turkestan.

Stem 6–18 in., leafy below, rather stout, strict, erect. *Leaves* 2–5 by 1/10–1/8 in., linear, acute, flat, nearly smooth; ligule oblong. *Panicle* 1–1½ in., erect. *Spikelets* 1/6–1/5 in.; gl. I shorter than II, sometimes 2-lobed nearly ⅓ way down with erose lobes, at others hardly lobed but unequally rather deeply toothed.—Perhaps only a form of *D. cæspitosa,* the flg. glumes of which vary much in breadth and toothing. Regel describes the leaves of *kœleriodes* as narrow setaceous and scabrid above, which is totally at variance with his specimens, which are even broader than those of the Indian plant.

81*. HOLCUS, *Linn.*

Annual or perennial tomentose grasses. *Leaves* usually flat. *Spikelets* panicled, laterally compressed, oblong, 2-fld. (both fl. bisexual, or upper male or neuter), not jointed on their pedicels; rachilla articulate at the base produced into a short stipes beyond gl. IV. *Glumes* 4; I and II empty, persistent, obtuse or acute, keeled, I 1-nerved; II 3-nerved; III and IV shorter than I and II, membranous; III not awned, at length hardened; IV with a slender dorsal awn; palea narrow, 2-keeled. *Lodicules* 2, cuneiform. *Stamens* 3. *Styles* very short, distinct. *Grain* oblong, free within the hardened gl.—Species about 8, European and African.

H. lanatus, *Linn. Sp. Pl.* 1047; perennial, softly tomentose, panicle spreading pale green, spikelets ⅙ in., awn of gl. IV hardly exserted. *Fl. Dan.* t. 1181; *Host Gram. Austr.* i. p. 275, t. 2; *Engl. Bot.* t. 1169; *Knapp Gram. Britt.* t. 17; *Kunth Enum. Pl.* i. 34, *Suppl.* 24, t. 9, f. 2; *Ledeb. Fl. Ross.* iv. 410; *Reichb. Ic. Fl. Germ.* t. 105; *Boiss. Fl. Orient.* v. 532.

Sikkim Himalaya; Darjeeling, alt. 7000 ft., *Clarke,* apparently naturalized.—Distrib. Europe, temp. Asia.

Stems 1–3 ft., densely tufted, roots fibrous, nodes villous. *Leaves* 6–10 in.; upper sheaths inflated; ligule short, oblong. *Panicle* 2–5 in., branches 2–3-nate. *Spikelets* pale green or reddish; gl. I and II acute or apiculate, strongly-nerved; II often retuse and mucronulate; III smooth and shining in fruit.—*H. mollis,* L., an almost equally common European grass, may be expected to be introduced into the hills of India; it closely resembles *H. lanatus,* but has a creeping rootstock and the awn of gl. IV is longer and exserted.

82. **AVENA**, *Linn.*

(Including Trisetum, *Beauv.*)

Annual or perennial grasses. *Leaves* usually flat. *Spikelets* 2- or more-fld., in effuse contracted or spiciform panicles, not jointed on their pedicels; rachilla jointed at the base and sometimes between the flg. glumes. *Glumes* dorsally rounded, I and II empty, subequal or unequal, thin, persistent, few- or many-nerved; fl. gls. ovate or lanceolate, entire 2-toothed or -cleft, lobes awned or not, 3–7-nerved, lateral nerves sometimes obsolete; awn dorsal below the cleft, usually long and geniculate or reflexed with a twisted base, rarely straight; palea narrow, keels scabrid or ciliate. *Lodicules* usually 2-fid. *Ovary* glabrous or top villous; styles short, free. *Grain* various, free or (in some sp. with villous top) adherent to the palea.—Species many, chiefly N. temperate.

Having regard to the Indian species of *Avena* and *Trisetum*, I find it impossible to separate them by characters of the fl. gls., there being all transitions in *A. aspera* from the entire gl. of *Avena* to the 2-aristate lateral lobes of *Trisetum*. There are two distinct types of ovary in both genera, the perfectly glabrous, and that with a broad hirsute or villous crown, characters which may suggest a better means of breaking up *Avena*. The following arrangement is provisional only. It is difficult to diagnose *Avena* from *Bromus* & *Koeleria* (*q.v.*).

Sect. I. EUAVENA. Annual. *Spikelets* pendulous; gl. I and II 5–7-nerved, lobes of fl. gls. awned or not; awn cylindric, column 2-grooved, conoidally twisted. *Ovary* with a villous top.—The determinations of the species of this section are by Dr. Stapf.

* Flowering glumes glabrous or hairy at the base only, rachilla tenacious or tardily disarticulating at the base.

A. SATIVA, *Linn. Sp. Pl.* 79.

Cult. in NORTHERN INDIA, from Bengal to the Indus; and in the HIMALAYA up to 12,000 ft.

There are few specimens of the common oat in Indian collections. These represent two varieties.

Var. *sericea*; branches of panicle spreading equally all round, spikelets 2-fld., both fl. perfect, gls. III and IV silkily hairy at the base, rachilla silkily villous.—Bhotan, *Griffith.* Sikkim Himalaya, cult. at Yeumtong, alt. 12,000 ft., *J. D. H.* Beluchistan and Affghanistan; wild in cult. fields in the Kurrum Valley, *Aitchison* (n. 24).

Var. *orientalis*; branches of panicle more or less secund, spikelets 2–3-fld. the lower only perfect, gl. III with stiff hairs at the base, IV and rachilla glabrous. A. orientalis, *Schreb. Spicil. Fl. Lips.* 52; *Host Gram. Austr.* iii. 31, t. 44; *Kunth Enum. Pl.* i. 302, *Suppl.* 255; *Boiss. Fl. Orient.* v. 541. A. sterilis, *Royle Illustr. Himal. Bot.* 417.—N.W. India, *Royle.* Soane Valley, *J. D. H.* Murshidabad, *Clarke.*

** Flowering glumes hairy to and beyond the middle; rachilla freely disarticulating at the base, more tardily above it; gl. III and IV firm, shortly 2-fid., scaberulous.

1. **A. fatua,** *Linn. Sp. Pl.* 80; panicle branches equally spreading all round, gls. I and II subequal 9-nerved, III and IV firm scaberulous shortly 2-fid. clothed below with long fulvous hairs. *Host Gram. Austr.* ii. 42, t. 58; *Fl. Dan.* t. 1629; *Engl. Bot.* t. 2221; *Knapp Gram. Britt.* t. 93; *Kunth Enum. Pl.* i. 302, *Suppl.* 256; *Reichb. Ic. Fl. Germ.* t. 103; *Steud. Syn. Gram.* 230; *Ledeb. Fl. Ross.* iv. 412; *Boiss. Fl. Orient.* v. 543; *Royle Ill. Himal. Bot.* 416; *Duthie Grass. N.W. Ind.* 31, *Fodd. Grass. N. Ind.* 51. A. byzantina, *C. Koch in Linnæa*, xxi. (1848) 392. A. sterilis, *Del. ex Boiss. l. c.*; *Duthie l. c.* 32 (*non Linn.*)? A. pilosa, *M.B. Griseb. in Goett. Nachr.* (1868) 78.

The PANJAB, N.W. HIMALAYA, and WESTERN TIBET, in cult. fields, ascending to 9000 ft. SIKKIM HIMALAYA, alt. 9000 ft., *Gammie.*—DISTRIB. Temp. Europe, N. Africa, and N. Asia.

Stem 1–3 ft., stout, nodes hairy. *Leaves* flat, scaberulous; sheaths smooth; ligule short, torn. *Panicle* 6–10 in.; branches and pedicels scabrid. *Spikelets* about 1 in.; rachilla hairy. *Callus* of gl. III short, obtuse, setulose; awn stout, longer than the gls.

2. **A. barbata,** *Brot. Fl. Lusitan.* i. 108; softly tomentose, panicle

subsecund, spikelets 2-fld., gls. I and II 9-nerved, III and IV thin not scaberulous 2-fid with awned lobes densely hirsute below the middle. *Ledeb. Fl. Ross.* iv. 413; *Boiss. Fl. Orient.* v. 543; *Griseb. in Goett. Nachr.* (1868) 78. A. athenanthera, *Presl Gram. & Cyp. Sic.* 30. A. hirsuta, *Roth. Catalect. Bot.* iii. 19; *Kunth Enum. Pl.* i. 302; *Webb. Phyt. Canar.* iii. 400, t. 247; *Steud. Syn. Gram.* 230; *Royle Ill. Himal. Pl.* 417. A. hirtula, *Lag. Gen. & Sp. Nov.* 50; *Kunth l. c. & Suppl.* 256.

Western Himalaya; Kumaon, *Thomson.*—Distrib. Mediterranean region, W. and N. Asia.

Habit of *A. fatua*, from which its hairy leaves, &c. distinguish it.—These Avenaceous weeds of cultivation have not been much collected in India, where the above and others no doubt abound.

Sect. II. Annual, dwarf. *Spikelets* erect, gl. I 1-nerved, II 3-nerved, top of fl. gl. 2-aristate. *Ovary* glabrous, narrow.

3. **A. Cavanillesii,** *Koch Syn. Fl. Germ. Ed.* I. i. 797; leaves flat or convolute, panicle spiciform, spikelets 2-fld. A. Loefflingiana, *Cav. Ic.* i. t. 45, f. 1; *Gaud. Agrost. Helvet.* i. 327; *Balb. Misc. Bot.* i. 12 (*non Linn.*). A. valesiaca, *Nym. Syll. Fl. Europ.* 414. Trisetum Cavanillesii, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 63 (*excl. Syn. Cav.*); *Kunth Enum. Pl.* i. 297; *Steud. Syn. Gram.* 225. T. Gaudinianum, *Boiss. Voy. Esp.* 653, *Fl. Orient.* v. 535; *Parlat. Fl. Ital.* i. 259. T. Loefflingianum, *Beauv. ex Duthie Grass. N.W. Ind.* 31. T. valesiacum, *Boiss. ex Nym. Conspect.* 814.

British Beluchistan; at Killa Abdulla, *Duthie.* Peshawur, *Stewart* (*ex Duthie*).—Distrib. Westward to Spain.

Stems 4–6 in., densely tufted. *Leaves* ½–1 in., linear, obtuse, sparsely hairy, rather thick; ligule oblong, hyaline. *Panicle* 1–2 in., oblong; branches and pedicels very short, smooth. *Spikelets* ⅙ in., shining, green with purplish awns, 2-fld. and with a third imperfect; rachilla densely villous, hairs longer than the gl.; gl. I and II very unequal, keels smooth; I lanceolate; II oblong, acute; III much shorter than II, lanceolate, hyaline above and 2-nerved, the nerves ending in lateral awns as long as the gl.; callus bearded; dorsal awn nearly twice as long as the gl.; palea narrowly linear, nerveless.

Sect. III. Perennial. *Spikelets* erect. *Fl. gls.* 5–9-nerved. *Ovary* hirsute.

4. **A. pratensis,** *Linn. Sp. Pl.* 80; panicle contracted, spikelets 5–7-fld., gl. I and II 3-nerved, flg. gls. entire rounded notched or erose at the tip. *Fl. Dan.* t. 1083; *Host Fl. Austr.* ii. 38, t. 51; *Engl. Bot.* t. 1204; *Knapp Gram. Britt.* t. 91; *Reichb. Ic. Fl. Germ.* i. t. 99; *Kunth Enum. Pl.* i. 300, *Suppl.* 254; *Steud. Syn. Gram.* 231; *Ledeb. Fl. Ross.* iv. 414; *Boiss. Fl. Orient.* v. 546; *Duthie Grass. N.W. Ind.* 31. A. alpina, *Sm. in Trans. Linn. Soc.* x. (1811) 335; *Kunth l. c.* 301; *Griseb. in Goett. Nachr.* (1868) 78. A. argæa, *Boiss. l. c.* A. bromoides, *Mert. & Koch in Roehl. Fl. Deutschl. Ed.* III. i. 570. A. secunda, *Jacquem. mss.* (*non Salisb.*). Heuffelia præusta & pratensis, *Schur Enum. Pl. Transs.* 780. H. australis, *Fourn. in Ann. Soc. Linn. Lyon, N.S.* xvii. (1869) 183.

Western Himalaya; from Kashmir to Garwhal, alt. 9–15,000 ft.—Distrib. Europe, Asia Minor.

Stems 10–18 in., densely tufted, rather stout, strict, leafy below. *Leaves* 6–10 by ⅛–⅙ in., erect, coriaceous, scaberulous above, margins thickened; sheath nearly smooth; ligule oblong, lacerate. *Panicle* 3–4 in., erect or inclined; branches short, erect, and pedicels scaberulous. *Spikelets* ½–¾ in., narrow, glistening, green or coppery-brown; rachilla penicillate; gl. I and II scarious, nerves scaberulous; I linear-oblong; II oblong-lanceolate; fl. gls. oblong, scarious above the middle, strongly 7–9-nerved, tip and margins broadly hyaline, margins and nerves scaberulous; awn median-dorsal, twice as long as the gl., bent just above the top of the gl.; keels of palea smooth.—Hackel (in litt.) refers the Kashmir plant to *A. argaea*, Boiss., which the latter author distinguishes from *A. pratensis* by the short leaves, very short branches of the short few-fld. panicle, and golden-brown spikelets, characters all of which may be traced in Kashmir and European *A. pratensis*.

5. **A. aspera,** *Munro ex Thw. Enum. Pl. Zeyl.* 372; tall, slender, panicle elongate contracted flexuous inclined or nodding, branches suberect naked below, spikelets 3–4-fld. scattered, gl. I and II very unequal scarious, I 1–3-nerved, II 5-nerved, fl. gls. coriaceous smooth or scabrid 5–7- (rarely 3-) nerved tip entire erose 2-fid or 2-aristate, keels of palea closely pectinately ciliate. *Trimen Cat. Ceyl. Pl.* 109; *Griseb. in Goett. Nachr.* (1868) 78.

SIKKIM HIMALAYA, alt. 9–10,000 ft., *J.D.H.*, *Clarke*. KHASIA HILLS, alt. 5–6000 ft., *Griffith*, &c. NILGHIRI HILLS, *Schmid*, *Maxwell*. CEYLON, alt. 6000 ft., *Thwaites*.

Stem 2–5 ft., slender or rather stout, erect or inclined, glabrous, or nodes slightly pubescent. *Leaves* 6–12 in. or more, flat or convolute, rarely ½ in. diam.; sheaths smooth, glabrous or pubescent; ligule short, truncate, membranous. *Panicle* 8–16 in., usually nodding, rachis and branches smooth or faintly scabrid; lower branches 1–6 in., solitary geminate or fascicled. *Spikelets* ⅓–⅔ in. long, glistening, green, oblong; rachilla penicillate, slender; gl. I narrowly lanceolate, acuminate; II ⅓ longer, oblong-lanceolate, rather shorter than III; fl. gls. ovate-lanceolate, glabrous, from entire to 2-dentate or cleft nearly ⅓ way down; callus bearded; awn dorsal rather above the middle but below the cleft of the gl., and twice to thrice its length, slender, column twisted then bent and more or less recurved; keels of palea with long close-set fine cilia. *Lodicules* narrow, cleft. *Anthers* linear. *Ovary* obovoid or pyriform, top densely hirsute.—A very variable plant. Some of the Khasian specimens have stems 5 ft. high, and as thick as a goose-quill below, others are much smaller and very slender. The fl. gl. are most scabrid in Ceylon and Peninsular specimens, least so in Sikkim ones which pass into var. *Roylei*. The nearest European species is *A. Besseri*, Gmel. (*A. sempervirens*, Bess. non Vill.) of Hungary, a rigid species with narrower scabrid leaves, usually longer spikelets and obtuse erose flg. glumes.

A. ASPERA, PROPER; leaf sheaths smooth, panicle glabrous, fl. gl. more or less scaberulous entire 2-dentate or 2-fid., lobes not awned.—Sikkim, the Khasia and Nilghiri Hills and Ceylon.

Var. *Roylei*, Hook. f.; leaf-sheaths glabrous or softly pubescent, panicle glabrous or puberulous, fl. gls. quite smooth tip entire 2-toothed or 2-fid almost to the awn into acuminate or long-awned lobes, or tip split into 3–4 short unequal bristles. A. aspera, *Griseb. l. c.* A. pubescens, *Royle Ill. Himal. Pl.* 417; *Duthie l. c.* 32. Trisetum virescens, *Nees ex Steud. Syn. Gram.* 226; *Duthie Grass. N.W. Ind.* 31 (*non Regel*).—Avena, *Wall. Cat.* n. 3793.—Kashmir to Nepal, alt. 6–12,000 ft. A very common grass, often 4–5 ft. high with leaves half an inch broad.

Var. *parviflora*, Hook. f.; sheaths villously pubescent, branches of panicle short scabrid, spikelets crowded shortly pedicelled ¼ in. long, gl. II 3-nerved, fl. gls. 2-dentate smooth.—Sikkim, on Singalela, alt. 11,000 ft., *Clarke*.

Var. ? *Schmidii*, Hook. f.; stem slender, leaves chiefly radical, sheaths softly hairy, panicle very contracted, rachis short branches and very short pedicels puberulous or scaberulous, spikelets ⅓ in. 2–3-fld., flg. gls. very scabrid 5-nerved tip 2-aristate, keels of palea shortly ciliate.—Nilghiri Hills, *Schmid*; Ootacamund, alt. 7500–8000 ft., *Clarke*.—Possibly a distinct species. One specimen has 7-nerved fl. gls.

6. **A. polyneura,** *Hook. f.*; panicle pyramidal, branches long few-fld.

lower horizontally spreading, spikelets ¾ in. long, glumes opaque all with very strong close-set raised nerves, I 1–3-nerved, II 5-nerved, fl. gls. ovate-lanceolate tip 2-dentate 7–9-nerved, keels of palea pectinately ciliate.

NILGHIRI HILLS; Dodabetta, alt. 8000 ft., *Gamble.*

Stem 2–3 ft., rather stout, strict. *Leaves* strict, narrow, convolute; sheaths deeply grooved, lower sparsely hairy; ligule very short, truncate. *Panicle* 8 in., and nearly as broad; branches 2–3-nate, smooth. *Spikelets* reddish-brown.—Possibly only a state of *aspera*, as more specimens may prove; but of a very different habit and conspicuous for the large spikelets and opaque ribbed glumes.

Sect. IV. Perennials. *Spikelets* erect. *Fl. gls.* 3–5-nerved. *Ovary* quite glabrous.

7. **A. subspicata,** *Clairv. Man. Herb.* 17; pubescent or tomentose, ligule oblong, panicle spiciform or ovoid strict erect dense-fld. rarely effuse, spikelets ⅙–¼ in. 2–3-fld. ovoid-oblong very shortly pedicelled, gl. I and II subequal or II longest, fl. gls. ovate or ovate-lanceolate 2-cuspidate or shortly 2-aristate 1- or faintly 3-nerved, awn reflexed rather longer than the gl. *Svensk Bot.* t. 722; *Reichb. Ic. Fl. Germ.* i. t. 98; *Griseb. in Goett. Nachr.* (1868) 78; *Ledeb. Fl. Ross.* iv. 418. A. airoides, *Koel. Gram. Gall. & Germ.* 208. A. mollis, *Mich. Fl. Am. Bor.* i. 72. A. phleoides, *Urv. in Mem. Linn. Soc. Par.* iv. (1826) 601. A. toluccensis, *H. B. & K. Nov. Gen. & Sp.* i. 148. Trisetum airoides, *Roem. & Sch. Syst.* ii. 666. T. andinum, *Benth. Pl. Hartw.* 261; *Steud. l. c.* 228. T. antarcticum, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 61 (*non Nees*). T. grœnlandicum & labradoricum, *Steud. Syn. Gram.* 228. T. molle, *Kunth Rev. Gram.* i. 101, *Enum. Pl.* i. 296; *Torrey Fl. N. York,* ii. 452, t. 154; *Steud. l. c.* T. phleoides, *Kunth l. l. c.* 101, 295 (*non Trin.*). T. spiciforme, *Dulac Fl. Haut. Pyren.* 86. T. subspicatum, *Beauv. Agrost.* 88; *Kunth Enum.* i. 295, *Suppl.* 248; *Duthie Grass. N. W. Ind.* 31; *Hook. Fl. Bor. Am.* ii. 244; *Hook. f. Fl. Antarct.* i. 97, ii. 396, *Handb. N. Zeal. Fl.* 335; *Benth. Fl. Austral.* vii. 588; *Steud l. c.* 225. T. toluccense, *Kunth Revis. l. c.* 297, t. 60, *Enum. l. c.* 296; *Steud. l. c.* Aira spicata, *Linn. Sp. Pl. Ed.* II. 95 (*non Ed.* I.); *Fl. Dan.* t. 228. Aira subspicata, *Linn. Syst. Ed.* X. 873; *Host Gram. Austr.* ii. 33, t. 45; *Wulf. in Jacq. Collect.* iii. t. 19, f. 3. Koeleria aristata, *Loisel. Fl. Gall. Ed.* II. i. 66. K. spicata, *Willk. & Lange Prodr. Fl. Hisp.* i. 72. K. subspicata, *Mart. ex Reichb. Fl. Germ. Excurs.* 49.

ALPINE and SUBALPINE HIMALAYA and TIBET, alt. 10–18,000 ft. (18,500 ft. in Kunawur, *Jacquemont*).—DISTRIB. Alpine, Arctic, and Antarctic regions.

Stems densely tufted, 6–24 in., strict, stout or slender, always pubescent or tomentose. *Leaves* flat, soft, hairy, rarely glabrate, lower sheaths loose. *Panicle* 2–4 in., from shortly oblong to cylindric, rarely interrupted or lobed with a few very short spreading lower branches. *Spikelets* yellowish-green, purplish, or white, densely imbricating; rachilla short, hairy; gl. I and II more or less unequal, nearly as long as III, keels scaberulous; I 1-nerved; II 3-nerved; fl. gls. glabrous or puberulous, tip sometimes almost entire; callus bearded; awn inserted ⅓–⅙ way below the tip, column slightly twisted but sometimes awn shorter than the gl. and straight; keels of palea scabrid. *Lodicules* oblong, 2-fid. *Anthers* short. *Ovary* fusiform, glabrous. *Grain* fusiform, compressed.

8. **A. Clarkei,** *Hook. f.*; stem very slender and branches of panicle pubescent or tomentose, ligule very short, panicle slender spiciform interrupted, spikelets narrow ⅙–¼ in. 2–3-fld. glabrous sessile or shortly pedicelled, gl. I and II unequal, fl. gls. narrowly lanceolate acuminate tip

2-aristulate 1- or sub 3-nerved, awn longer than the gl. recurved or reflexed column not twisted.

KASHMIR; at Laka and Budrawur, alt. 10–11,000 ft. CHAMBA; Dalhousie, alt. 8700 ft., *Clarke.*

Stem 1–2 ft. *Leaves* 4–8 in., flaccid, softly hairy on both surfaces; sheath with spreading or reflexed soft hairs. *Panicle* 3–5 in., erect or inclined, rachis slender; lower branches solitary or fascicled, rarely 1 in. long. *Spikelets* erect, pale brown, shining, rachilla penicillate with very long hairs; gls, hyaline as in *A. subspicata,* but longer and narrower.—Very near *A. subspicata,* but much more slender, with a longer loose panicle of shining much narrower spikelets, with obsolete side nerves.

9. **A. micans,** *Hook. f.*; stem and rachis of panicle pubescent or tomentose, leaves glabrous, ligule short lacerate, panicle contracted elongate ovoid or linear interrupted dense fld., branches short flowering to the base, spikelets $\frac{1}{6}$ in. densely imbricate silvery hyaline 3–5-fld. quite glabrous, gl. I and II very unequal 3-nerved, fl. gls. lanceolate obscurely 5-nerved, tip acuminate shortly 2-aristate, awn inserted $\frac{1}{3}$ way from the tip very slender as long as the gl. column not twisted.

WESTERN HIMALAYA; Garwhal, banks of the Ganges, alt. 8–10,000 ft., *Duthie.*

Stems 12–18 in., densely tufted, rather stout, leafy. *Leaves* 6–12 in. flat, narrow, rigid, finely acuminate strongly nerved, smooth or scaberulous; sheath quite smooth; ligule reniform, membranous. *Panicle* 3–4 in. by $\frac{1}{2}$–1$\frac{1}{2}$ broad, erect or inclined, strict or subflexuous; lower branches solitary, densely flowering to the base. *Spikelets* very pale greenish yellow; rachilla slender, ciliate; gl. I lanceolate, II $\frac{1}{3}$ longer than I oblong-lanceolate, keels of both scaberulous; fl. gls. with bearded calli; awn straight or recurved; keels of palea minutely scabrid. *Lodicules* narrow, cleft. *Anthers* linear. *Ovary* obovoid, quite smooth, style bases close together.—Quite unlike any other Indian species, but very near *A. virescens,* Regel of Turkestan which has flaccid leaves and an entire tip of fl. gls.

10. **A. flavescens,** *Linn. Sp. Pl.* 80; tall, slender, quite glabrous, ligule long, panicle effuse flexuous inclined or nodding branches capillary few-fld. naked below, spikelets $\frac{1}{3}$ in. 2–3-fld brown shining rachilla slender, gls. spreading, I and II unequal hyaline narrow I 1-nerved, II 3-nerved, fl. gls. narrowly lanceolate 3-nerved tip acuminate 2-aristate, awn stout inserted $\frac{1}{4}$–$\frac{1}{3}$ way below the tip, twice as long as the gl. base twisted. *Fl. Dan.* t. 1507; *Host Gram. Austr.* iii. 27, t. 38; *Engl. Bot.* t. 952; *Knapp Gram. Britt.* t. 89; *Reichb. Ic. Fl. Germ.* t. 99; *Ledeb. Fl. Ross.* iv. 417; *Griseb. in Goett. Nachr.* (1868) 78. Trisetum flavescens, *Beauv. Agrost.* 88; *Kunth Enum. Pl.* i. 298, *Suppl.* 252, t. 19, f. 2; *Boiss. Fl. Orient.* v. 537.

TEMPERATE HIMALAYA; Sikkim, alt. 12–13,000 ft., *J. D. H.*—DISTRIB. Europe N. Asia, Japan, N. Africa.

Stem 2–3 ft. *Leaves* 6–18 in., flat, finely acuminate, more or less hairy; sheaths smooth; ligule elongate, membranous, lacerate. *Panicle* 3–5 in., quite glabrous, lower branches solitary or 2-nate. *Spikelets* larger than in most other species of this section, the awn longer; rachilla nodose below the fl. gls., penicillate with long hairs; gls. I and II lanceolate, acuminate; fl. gls. chartaceous with hyaline margins and tips, keels scaberulous as are the keels of the palea. *Lodicules* short, 2-lobed. *Anthers* small. *Grain* narrow.

11. **A. aenea,** *Hook. f.*; stem glabrous, ligule short rounded, panicle spiciform dense-fld. oblong or linear simple or lobed, branches very short, spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. 2–3-fld. densely imbricating sessile or very shortly pedicelled dark or pale brown shining, glumes hyaline I 1-nerved, II 1–3-

nerved, fl. gls. ovate faintly 5-nerved tip acuminate 2-aristate, awn twice as long as the gl. or less reflexed, column twisted. Trisetum aureum, *Nees ex Steud. Syn. Gram.* 225 (*non Tenore*); *Duthie Grass. N.W. Ind.* 3. T. aeneum, *Hack. mss.*

WESTERN HIMALAYA, alt. 11–12,000 ft., from Kashmir to Kumaon.

Stem erect, 1–2 ft., stout or slender. *Leaves* 6–10 by $\frac{1}{6}$–$\frac{1}{4}$ in., glabrous or hairy, as are the sheaths. *Panicle* 3–4 by $\frac{1}{2}$–1 in. diam., erect, strict, or very narrow looser-fld. and flexuous; rachis branches and pedicels quite glabrous. *Spikelets* erect; rachilla penicillate; glumes not widely spreading, all acuminate; I lanceolate; II $\frac{1}{3}$ longer, oblong-lanceolate; fl. gls. rather longer than II, keel scaberulous as are the keels of the palea. *Grain* fusiform, compressed.

12. **A. sikkimensis,** *Hook. f.*; tall, slender, stem and panicle quite glabrous, ligule short rounded, panicle narrow elongate effuse nodding flexuous, branches few-fld. capillary, spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. 3–4-fld. sessile or shortly pedicelled pale or brown, rachilla not long, gls. I and II unequal acute hyaline glistening, fl. gls. coriaceous ovate 2-aristate, 1–3 nerved, chartaceous smooth, awn inserted $\frac{1}{6}$–$\frac{1}{3}$ way below the tip as long or nearly twice as long as the gl. reflexed column twisted.

SIKKIM HIMALAYA; Lachen and Lachoong Valleys, alt. 10–11,000 ft., *J. D. H.*

Stem 2–3 ft. *Leaves* 6–12, by $\frac{1}{6}$–$\frac{1}{4}$ in., more or less hairy, flat, flaccid; sheaths glabrous except near the mouth. *Panicle* 6–10 in.; branches subsecund, fascicled, $\frac{1}{2}$–1 in. long, naked below. *Spikelets* usually 4-fld., sometimes nearly as brown as in *A. flavescens.*

13. **A. flaccida,** *Hack. mss.*; very slender, quite glabrous, panicle small open, branches few capillary spreading, spikelets few pedicelled 3-fld. $\frac{1}{4}$ in. long white and rose-colrd., rachilla long slender scaberulous, gls. I and II very unequal subulate-lanceolate, I and II 3-nerved, fl. gls. ovate-lanceolate acute 5-nerved, awn inserted a little below the tip as long as the gl. straight column not twisted.

The PANJAB; Black Mts., alt. 8–9000 ft., *Duthie* (n. 7609 *in part*).

A foot high. *Leaves* 4–6 by $\frac{1}{6}$–$\frac{1}{4}$ in., quite glabrous; ligule short, rounded. *Panicle* 3 in. long, branches rather distant. *Spikelets* erect; gl. I much shorter and narrower than II; fl. gls. smooth, glabrous, chartaceous, white in the lower half pale rose in the upper, margins and tip hyaline, nerves very slender; awn very delicate; keels of narrow palea smooth. *Lodicules* lanceolate. *Ovary* pyriform, quite smooth, style bases rather distant.—Described from a single insufficient specimen.

DOUBTFUL SPECIES.

A. BENGHALENSIS, *Schwaegr. Breit. ex Steud. Nom. Ed.* I. 94. I have no clue to this plant, which is not taken up in Ed. II of Steudel's Nomenclator.

A. PILOSA, *M. Bieb. Fl. Taur. Cauc.* iii. 84; *Griseb. in Goett. Nachr.* (1868) 78 Tibet, *Schlagintweit.*—I have seen no Tibetan specimen of this, for which Griesbach is the authority.

83. DANTHONIA, *DC.*

Annual or perennial grasses. *Spikelets* 2- or more fld. (fls. all perfect or the uppermost male) panicled, erect, not jointed on their pedicels; rachilla hairy and jointed at the base and between the fl. gls., produced beyond the uppermost gl. *Glumes* 5 or more, I and II empty, subequal, as long as the whole spikelet, persistent, keeled, acute or acuminate; flg. gls. dorsally rounded, ciliate, 7–9-nerved, 2-fid, lobes acute at the base or awned and with a rigid twisted awn in the sinus; palea broad. *Lodicules* 2, fleshy. *Stamens* 3. *Styles* free. *Grain* free within the membranous or hardened gl. and palea.—Species about 100 enumerated.

1. **D. himalaica,** *Hook. f.*; leaves as long as the stem wiry, panicle 3–4 in. contracted few-fld., branches and pedicels very short, spikelets few ⅔–1 in., 5–6-fld., gls. I and II unequal 6–7-nerved, flg. gls. sparsely hairy 9-nerved, lateral awns 0.

KUNAWAR; Jaunsar, on Lokardi Peak, alt. 8–9000 ft., *Duthie.*

Stems 12–18 in., densely tufted, filiform. *Leaves* convolute, erect, quite smooth, deeply ribbed in the inner surface; sheath short, smooth; ligule ⅛ in., hyaline, lacerate. *Panicle* of 4–8 erect spikelets; rachis and short erect pedicels, smooth, glabrous. *Gls.* I and II pale brown, much longer than the flg. gls., finely acuminate, margins hyaline, I 6–7-nerved; II longest, 7-nerved; flg. gls. ⅓–½ in., pale green, 2-fid; awn straight, base strongly twisted; callus silkily villous; palea short, obtusely 2-lobed, keels scabrid. *Lodicules* clavellate. *Anthers* as long as the palea. *Ovary* ovoid, hirsute, styles short, stigmas long.

2. **D. exilis,** *Hook. f.*; stem and leaves filiform, panicle short contracted racemiform few-fld., branches and pedicels very short, spikelets ½ in. 3–5-fld., gl. I and II unequal 1–3-nerved, fl. gls. villous, lateral awns very short.

KASHMIR; Tilail and Bargil, alt. 9–11,000 ft., *Clarke*; Gurail, alt. 8–9000 ft., *Duthie.*

Stem 3–10 in., densely tufted, very slender. *Leaves* 3–5 in., convolute; ligule short. *Panicles* ½–1 in., erect or cernuous, 6–10-fld., green or brownish, branches and pedicels smooth. *Spikelets* erect; rachilla very short between the upper gls.; gl. I and II scarious, lanceolate, acuminate, 1-nerved or obscurely 3-nerved at the base, I the shortest; flg. gls. much shorter than II, oblong, coriaceous, faintly 7-nerved, cleft nearly to the middle, lateral awns as long as their gl., median twice as long erect; callus densely bearded; palea linear-lanceolate, 2-toothed, sparsely hairy; nerves strong, scabrid. *Grain* obovoid, smooth, glabrous.

3. **D. cachemyriana,** *Jaub. & Sp. Illustr. Pl. Orient.* iv. 46, t. 331; stems ascending from a stout woody stock, leaves very long narrow convolute, panicle contracted, spikelets ⅔–¾ in., gl. I and II subequal 3–7-nerved, flg. gls. sparsely hairy, lateral awns much longer than gl. II. D. kashmiriana, *Duthie in Atkins. Gaz. N.W. Ind.* 630, *Grass. N.W. Ind.* 32; *Griseb. in Goett. Nachr.* (1868) 78.

TEMPERATE and ALPINE HIMALAYA, and W. TIBET, alt. 10–14,000 ft.

Stem 1–2 ft., densely tufted, or creeping below and clothed with shining sheaths. *Leaves* as long as the stem or longer, erect, flexuous, wiry, glabrous; sheaths glabrous, or lower rarely tomentose; ligule a pubescent ridge. *Panicle* most variable in number and disposition of the spikelets, erect, 4–5 in. long, with 30 or more close erect spikelets ¾ in. long, or more lax with fewer (3–4 or more) spikelets on longer or shorter rarely spreading branches and pedicels, the latter smooth hairy or scabrid. *Spikelets* 2–5-fld., erect, pale, rather shining; rachilla more or less hairy; gls. I and II membranous, sometimes purple, rarely very sparsely hairy, keels smooth; I rather the smallest, nerves very variable, more or less trabeculate; flg. gls. much smaller, linear-lanceolate, cleft about ⅓ way down, 9-nerved; lateral awns as long as the gl. or longer, exserted, median strongly twisted often to the tip, variable in length, about twice that of gl. II; callus bearded; palea as long as the gl., linear, obtuse, keels nearly smooth. *Anthers* linear. *Grain* narrowly oblong, glabrous.—A very variable plant in panicle but constant in habit. Jaubert and Spach's figure is of a very starved small form, and I have not found in Jacquemont or other specimens the whorl of hairs at the top of the pedicel (base of gl. I and II) which they represent. The nervation of gl. I and II varies remarkably. I find both 3-nerved in Sikkim specimens, both 5-nerved in many Western Himalayan; both sub 7-nerved in Kunawur ones; both 4-nerved in Simla ones; I 3-nerved, II 5-nerved in some Western; I 5-nerved, II 7-nerved in Garwhal; I 5-nerved and II sub 6-nerved in Jacquemont's n. 260, in which the awn is twisted to the tip; both are very sparsely hairy in a few specimens. The lower sheaths are villous in Simla (Hattu) specimens.

Var. *minor*; stems 6–8 in. very slender, leaves filiform, panicle often recurved, spikelets 4–8, gl. I and II often purple 5–7-nerved. Danthonia No. 2. *Herb. Strach. & Winterb.*—Alpine Himalaya, from Garwhal to Sikkim, alt. 12–14,000 ft.

4. **D. Cumminsii,** *Hook. f.*; stem ascending, leaves filiform, panicle small, rachis and pedicels villous, spikelets 3–6 ⅓ in. long very shortly pedicelled, lateral awns of gl. III very short, median not twice as long as gl. II hardly twisted.

BHOTAN; Gnatong in the Sikkim frontier, alt. 12,000 ft., *Cummins*.

Possibly a form of *D. cachemyriana*, but the characters are marked. The specimens are curved in a semi-circle, no doubt from growing amongst rocks, as was the case with *Calamagrostis tripilifera*, var. (p. 262).

DOUBTFUL SPECIES OF DANTHONIA.

D. GRIFFITHIANA, *C. Muell. in Bot. Zeit.* xiv. (1856) 374.—Khasia Hills, *Griffith*.—Judging by the description this is not a *Danthonia*, but I have formed no idea of what it may be.

84. DUTHIÆA, *Hack.*

No. 123 in Clavis, p. 8.

Tufted perennial erect glabrous grasses. *Leaves* linear, subconvolute. *Spikelets* 3–5-fld., often bracteate, in a short simple unilateral raceme, laterally subcompressed, not jointed on the pedicels, uppermost fl. imperfect; rachilla articulate. *Gls.* I and II empty, persistent, lanceolate, acuminate, 7–11-nerved, dorsally rounded; fl. gls. herbaceous, oblanceolate, 7–11-nerved, 2-fid, awned in the sinus, margins membranous, awn half-twisted; palea 2-keeled, keels scabrid, excurrent. *Lodicules* 0. *Stamens* 3. *Ovary* hispid, narrowed into a slender style; stigmas very long, papillose, exserted from the top of the spikelets. *Grain* oblong, crowned with the style, hirsute.—Species 2, Western Himalaya and Affghanistan.

D. bromoides, *Hack. in Verhandl. Zool. Bot. Ges. Wien.* (1895) 200; spikelets 3–5-fld., rachilla hairy, gl. I and II 7–11-nerved margins narrowly hyaline, fl. gls. obtusely 2-lobed dorsally hairy below, style about as long as the stigmas. *Stapf in Hook. Ic. Pl.* t. 2474.

KASHMIR, alt. 12–13,000 ft., *Jacquemont, Duthie*. WESTERN TIBET, alt. 12,000 ft., *Thomson, Clarke*. Brenda Pass, KUNAWUR (*Herb. Saharunpore*).

Stems 18–24 in., slender, compressed, scaberulous above. *Leaves* 6–12 in., rather rigid, cauline very short, flat, acute; sheaths compressed, of uppermost inflated embracing the raceme; ligule oblong. *Raceme* 1–2 in., inclined, rachis scabrid. *Spikelets* 5–6, subsessile, ovoid, about ⅓ in. long (without the awns) green; bracts scarious; gl. I often faintly nerved; II 7-nerved, subaristate; flg. gls. oblanceolate, hairy below the middle, lobes obtuse; awn $\frac{2}{3}$-1 in., scabrid, obscurely geniculate. *Ovary* narrow, style $\frac{1}{8}$–$\frac{1}{6}$ in. long.—A remarkable grass, the character and affinities of which are discussed at length by Hackel, who places it next to *Bromus*, where it will be found (No. 123) in the clavis of this work, p. 8. The recognition by Dr. Stapf of a second species, *D. oligostachya*, Stapf (Avena oligostachya, *Munro in Journ. Linn. Soc.* xviii. (1880) 108, *name only*, *Aitchison l. c.* xix. (1882) 193, t. 30) proves the position of the genus to be near *Danthonia*, where I had placed it, before its publication by Hackel, when I deferred to that author's high authority.

Tribe VIII. CHLORIDEÆ. (See p. 6.)

84. MICROCHLOA, *Br.*

Slender perennial grasses. *Leaves* filiform, convolute. *Spikelets* very narrow, 1-fld., minute, 2-seriate, unilateral on a solitary terminal filiform curved spike, not jointed at the base, awnless; rachilla jointed at the base, not produced beyond gl. III. *Glumes* 3, I and II empty, membranous, 1-nerved, keeled, persistent; III very small, oblong, hyaline, awnless; palea as long as the gl., keels ciliate. *Lodicules* 2, truncate. *Anthers* linear. *Styles* distinct. *Grain* oblong, fusiform, glabrous, free within the hyaline gls.—Species 3, two confined to Africa and the following.

M. setacea, *Br. Prodr.* 208; *H. B. & K. Nov. Gen. & Sp.* i. 84, t. 22; *Beauv. Agrost.* 115, t. 20, f. 8; *Nees Agrost. Bras.* 441; *Fl. Afr. Austr.* 247; *Kunth Enum. Pl.* i. 258, *Suppl.* 201; *Doell in Mart. Fl. Bras.* ii. III. 76, t. 21; *Steud. Syn. Gram.* 202; *Benth. Fl. Hongk.* 428, *Fl. Austral.* vii. 608. M. elongata, *Br. in Wall. Cat.* n. 3807. Rottboellia setacea, *Roxb. Corom. Pl.* ii. 18, t. 132, *Fl. Ind.* i. 357. Nardus indica, *Linn. f. Suppl.* 105.

BENGAL, *Roxburgh*, on walls. NEPAL, *Wallich*. KHASIA HILLS, alt. 4–6000 ft., *J. D. H. & T. T.*, *Clarke*. CENTRAL PROVINCES; Chanda, *Duthie*. NILGHIRI HILLS, *Perrottet*.—DISTRIB. Tropics of Old and New World.

Stems tufted, 6–10 in., wiry. *Leaves* as long as the stem, curved, glabrous or sparsely hairy; ligule very short, ciliate. *Spike* 2–10 in., with the spikelets $\frac{1}{10}$–$\frac{1}{6}$ in. diam.; rachis slender, dorsally rounded. *Spikelets* $\frac{1}{15}$ in., close-set, alternating in two unilateral rows, erect; gls. I and II subequal, lanceolate, acute, twice as long as III, which is obtuse, hairy, nerveless; palea lanceolate, 2-toothed.

85. GRACILEA, *Koen.*

Small grasses. *Leaves* short. *Spikelets* 1–2-fld. (fl. unisexual?) collected in turbinate awned deciduous spicate clusters which are secund sessile and jointed on a filiform or capillary flexuous terminal rachis; rachilla not jointed, sometimes produced beyond gl. IV and bearing an imperfect fl. *Glumes* 4–6; I and II narrow, rigid, ciliate with long hairs, narrowed into long rigid scabrid awns, I narrowest; II with broad hyaline margins; III and IV broadly ovate, membranous, scaberulous, 3-nerved, shortly awned, tip entire or 2-cuspidate; palea as broad as the gl., 2-cuspidate. *Lodicules* cuneiform. *Anthers* small. *Grain* oblong, free. —Species, 2 Indian and African.

1. **G. nutans**, *Koen. in Ges. Naturf. Fr. Neue Schrift.* iv. (1803) 218; perennial? leaves lanceolate. Melanocenchris Rothiana, *Nees in*

Proc. Linn. Soc. i. (1841) 95; *Wight Cat.* n. 1768; *Dalz. & Gibs. Bomb. Fl.* 297. M. Perrottetii, *Jaub. & Sp. Ill. Pl. Or.* IV. 39, t. 326. Pommereulla monoeca, *Rottl. l. c.*; *Roth. Nov. Sp.* 33 (monoica); *Kunth Enum. Pl.* i. 321; *Wall. Cat.* n. 8905 *excl.* D.

MYSORE and the CARNATIC, *Heyne*, &c. CEYLON; Mannar district, *Trimen.*

Stems 6–8 in., stout and decumbent below, erect or geniculately ascending. *Leaves* ¾–1 in., narrowed from the subcordate base to the acute tip, rigid, margins setosely serrulate; ligule of short hairs. *Spikes* and clusters of spikelets as in *G. Royleana*, but tip of gl. III entire, IV bicuspidate.

2. **G. Royleana,** *Hook. f.*; annual, leaves filiform. Melanocenchris Royleana, *Nees in Proc. Linn. Soc.* i. (1841) 95; *Aitchis. Cat. Panjab Pl.* 168 (*excl. Syn.*); *Duthie Grass. N.W. Ind.* 33, *Fodd. Grass. N. Ind.* 54, t. 67; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* viii. (1893) 370. M. Jacquemontii, *Jaub. & Sp. Ill. Pl. Or.* iv. 36. Pommereulla monoica, *Wall. Cat.* n. 8905 D. P. Royleana, *Steud. Nom. Ed.* II. ii. 379. Amphipogon humilis, *Herb. Ham. ex Wall. Cat. l. c.*—Roylea, *Nees ex Steud. l. c.* 475.

The PANJAB PLAIN, *Hamilton, Royle,* &c., eastwd. to Delhi, *Clarke.* RAJPOOTANA, CENTRAL INDIA, the CONCAN, CANARA, and SCIND.—DISTRIB. Socotra, Nubia.

Stems 3–8 in., densely tufted, very slender. *Leaves* 1–2 in., flat or convolute, glabrous or margins below and sheaths setulose; ligule a ridge of hairs. *Spikes* filiform, 1–2 in., flexuous, often reclined or recurved; rachis 3-gonous, smooth; clusters of spikelets ¼–⅓ in. long including the awns, green or purple; awns of gl. I and II longer than the gls., of III very short.

Var. *plumosa*; clusters of spikelets ½ in. including the awns. M. plumosa, *Jaub. & Sp. l. c.* 37; *Hochst. in Flora* (1855) 273, 417. Pennisetum plumosum, *Hochst. ex Steud. Syn. Gram.* 201. Ptilonema plumosum, *Steud. l. c.* Eutriana abyssinica, *Br. ex Fresen. in Mus. Senkenb.* ii. (1837) 142.—The Panjab, Jhelum River, *Aitchison.* Scind, *Stocks.* Arabia, Abyssinia.

86. ENTEROPOGON, *Nees.*

Slender perennial grasses. *Leaves* long, very narrow. *Spikelets* very narrow, 1–2-fid. (lower fl. perfect upper if present male or neuter) unilateral in a solitary terminal slender spike, not jointed at the base; rachilla jointed at the base. *Glumes* 3 or 4; I and II unequal, narrow, hyaline, 1-nerved, persistent; III much larger, linear, rigid, scabrid, dorsally rounded, 3-nerved, tip entire, or acutely 2-fid with a short erect awn in the cleft; callus bearded; palea lanceolate, 2-toothed, keels scabrid. *Lodicules* 2. *Anthers* very long. *Styles* distinct. *Grain* narrow, free within the hardened gls.—Species, an African, and the following.

E. melicoides, *Nees in Lindl. Introd. Nat. Syst. Ed.* II. 449; *Wall. Cat.* n. 8893; *Wight Cat.* n. 1757; *Trim. Cat. Ceyl. Pl.* 109. Eutriana enteropogon, *Steud. Syn. Gram.* 216. Ischæmum melicoides, *Koen. ex Rottl. in Ges. Naturf. Neue Fr. Schrift.* iv. (1803) 211. Ctenium seychellense, *Baker Fl. Maurit.* 452. Festuca mysorensis, *Heyne ex Roem. & Sch. Syst.* ii. 600. ?Rottboellia triacantha, *Roth. Nov. Sp.* 43. R. pilosa, *Roth. in Roem. & Sch. l. c.* 785.

MYSORE, *Heyne, Wight.* BURMA; Shan Hills, *Collett.* CEYLON, *Trimen.*—DISTRIB. Seychelle Islds.

Stems 1–3 ft., densely tufted, wiry. *Leaves* nearly as long as the stem, up to $\frac{1}{4}$ in. broad, flat or convolute, tip capillary; ligule of long hairs. *Spikes* 6–10 in., flexuous or curved, rachis dorsally rounded. *Spikelets* $\frac{1}{8}$–$\frac{1}{4}$ in., loosely imbricate, rarely 2-seriate; gls. I and II glistening; III opaque, with a very thick raised midrib; awn about = the gl.

87. **TRIPOGON**, *Roth.*

Slender densely tufted grasses. *Leaves* usually convolute. *Spikelets* many-fld. (fl. all but 1–2 terminal perfect), 2-seriate and unilateral on a very slender terminal spike, not jointed at the base; rachilla produced between the glumes, jointed at the base. *Glumes* many, I and II unequal, distantly superposed, 1-nerved, empty, persistent; I usually lodged in a furrow of the rachis, and toothed or lobed on one side; II entire or notched below the mucronate or apiculate tip; III and following ovate, dorsally convex, 2-fid, and awned in the cleft, or 4-fid with the outer lobes awned, the inner membranous and rarely awned; palea broad or narrow, complicate. *Lodicules* 2. *Stamens* 3. *Styles* very short. *Grain* very narrow, free.—Species about 10, trop. and subtrop. Asia and Africa.

The species of *Tripogon* are very closely allied, and though dissimilar in many respects, are so variable in all, that they form an almost inextricable plexus. The most distinct are *T. capillatus, pauperculus, Wightii*, and *abyssinicus*, of which the latter almost passes into *Jacquemontii*. Glume I is remarkable from being in most species inæquilateral, one margin being deeply notched, or dilated suddenly below the middle into a wing or lobe or segment, which is sometimes displaced and appears as a small 3rd or lowest empty glume. The subequal symmetrical glumes of *T. pauperculus* and *Wightii* are unusual in the genus.—The length of the awns, and of the lobes of the gl. III vary in each species; and there is every intermediate between the species with two simple awned lobes one on each side of the median awn, as in *T. trifidus*, and the quadrifid top of the gl. of *T. filiformis*.—The species grow promiscuously on rocks or trunks of trees.

* Flg. glumes simply 2-fid with an interposed awn, the lobes awned or not.

† *Awn as long or longer than its glume.*

1. **T. capillatus,** *Jaub. & Spach. Illustr. Fl. Orient.* iv. 47, t. 332; gl. I and II narrowly lanceolate acuminate or awned, III villous at the base, awn many times longer than its gl. flexuous. T. capitatus (err. typ.) *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 371.

BEHAR; on Parusnath, *J. D. H., Clarke.* WESTERN GHATS; from the Concan to the Nilghiri Hills, *Jacquemont*, &c.

Stem very slender. *Leaves* 6–10 in., convolute. *Spike* 6–12 in., filiform or capillary, flexuous. *Spikelets* remote, $\frac{1}{10}$–$\frac{1}{8}$ in., few-fld., green; gl. I sometimes very minute, at others nearly as long as II, both sometimes awned, membranous with a broad defined nerve; lateral teeth of III shortly awned; median awn so slender as to be barely visible.

2. **T. pauperculus,** *Stapf in Hook. Ic. Pl.* t. 2442; dwarf, stems capillary, gl. I and II lanceolate subaristately acuminate symmetrical, III villous at the base, lateral lobes long-awned median-awn not twice as long as the gl.

WESTERN GHATS; near Poona, on stems of trees, *Woodrow.*

Stems 2–3 in., densely tufted, leafy to the tip. *Leaves* setaceous, involute, upper much longer than the spike, acute; sheaths striate, lower lax; ligule ovate, obtuse. *Spikelets* 1–3, remote, 1–4-fld.; gl. I and II 1-nerved, gl. I shorter than II; fig. gls. 1–4 with 1–2 empty above them, linear-oblong, 3-nerved; lateral lobes with capillary awns; median awn twisted at the base; palea oblong, keels ciliolate. *Anthers* minute, subglobose. *Grain* narrowly linear, cylindric.

3. **T. trifidus,** *Munro, ex Stapf in Kew Bulletin* (1892) p. 85; spikelets ⅙–½ in., gl. I lobed on one side, II narrowly lanceolate acuminate entire or notched below the tip, III villous at the base, awn twice as long as the gl. or longer.

SIKKIM HIMALAYA, alt. 5–6000 ft., *J. D. H.* MISHMI HILLS, *Griffith.* KHASIA HILLS, alt. 4–5500 ft., *Griffith.* (*Kew Distrib.* n. 6633, 6634).—DISTRIB. Tonkin.

Stem 8–18 in. *Leaves* 6–10 in. *Spikes* 2–12 in., stout or slender. *Spikelets* 3, close or distant, 4–10-fld.; gl. I lanceolate, acuminate or aristate, broadly lobed on one side, the lobe sometimes detached; II much longer, lanceolate, acuminate or 2-toothed with a short awn; III and following bearded at the base; lateral lobes simple, lanceolate, and awned or irregularly toothed in the inner margins, or rarely with a small tooth at its inner base; awn usually twice or thrice as long as the glume, erect and flexuous, or recurved; palea elliptic-oblong, obtuse, keels scabrid.—In the Sikkim specimens gl. I and II are sometimes very long lanceolate aristately acuminate with the lobe of I placed lower down, in others gl. I is much shorter than II, with a broad lateral lobe towards its base; in others again gl. I is deeply notched on one side towards the tip only; gl. II is 2-toothed below the tip and has 5 contiguous strands on the thickened disk; gl. III and its palea are longer and narrower than in any Khasia form, where, however, the plant is so variable that I hesitate to regard the Sikkim one as a different species.

4. **T. Wightii,** *Hook. f.*; spikelets 1–1½ in. 10–30-fld., gl. I and II subequal linear-oblong tip 2-toothed and mucronate, awn recurved as long or twice as long as its gl.

MYSORE; at Bellary (1834) *Wight* (n. 1793 ?).

Spikes 6–8 in., rachis as stout as a sparrow's quill. *Spikelets* 10–12, from ½–1½ in. apart; gl. I and II linear-oblong, membranous, hyaline, with a strong defined midrib; III rather narrow, base bearded, lateral lobes lanceolate not awned; palea oblong, keels obscurely scabrid.—A very distinct species, of which there are only spikes in Wight's Herbarium. Bellary is a botanically unexplored district.

†† *Awn shorter than its gl.*

5. **T. Lisboæ,** *Stapf in Kew Bulletin* (1892) 86; spikelets ⅛–½ in. 5–12-fld., gl. I lanceolate obtusely toothed on one side, II twice as long linear-oblong coriaceous apiculate, awn of III very short. Leptochloa tripogonoides, *Munro mss. ex Lisboa l. c.* Tripogon, n. 5, *Herb. Ind. Or. H. f. & T.* Tripogon sp. nov., *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 370.

RAJPUTANA; Mt. Abu, *Duthie.* The CONCAN, CANARA, and MYSORE, *Jacquemont*, &c.

Stem stout or slender, in Jacquemont's specimen 3 ft. high and as thick as a duck's quill below. *Leaves* 1–2 ft. by ⅙–⅓ in., quite smooth, flat or convolute. *Spikes* 6–10 in.; rachis stout or slender, strict. *Spikelets* usually densely crowded; glumes coriaceous; lobes of III short membranous not awned, base very shortly bearded; awn ¼ the length of its gl. or shorter; palea oblong, keels scaberulous.—The difference in stoutness of stem and spike, and of size of the spikelets is remarkable.

6. **T. Jacquemontii,** *Stapf in Kew Bulletin* (1892) 85; spikelets ⅛–¾ in. 10–20-fld., gl. I lanceolate lobed on one side, II ⅓ longer ovate-

lanceolate coriaceous nerve broad or narrow 2-toothed below the tip, awn half as long as its gl. or shorter. *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 370. T. bengalensis, *Munro mss.*

BENGAL; *Griffith* (*Kew Distrib.* n. 6636). MALWA, the CONCAN and DECCAN, *Jacquemont*, &c.

Stem very slender, 1–2 ft. *Leaves* filiform. *Spikes* 6–10 in., slender. *Spikelets* crowded or not; glumes subcoriaceous, uppermost flowerless; lobes of III ovate, acute, not awned, base shortly bearded; awn straight, variable in length; palea oblong, keels scaberulous.

Var. *submuticus*; gl. I subulate-lanceolate slightly oblique towards the base very much smaller and narrower than II, awn hardly longer than the lobes of the gl. T. submutica, *Hack. in Herb. Duthie.*—Western Himalaya; below Kotgurh, *Thomson.* Simla, alt. 7–8000 ft., *Duthie.*—The habitat is far removed from that of all other species. Duthie's specimen has the excessively slender habit and all other characters of the type but those above given. Thomson's are much shorter, with shorter leaves, and are intermediate between *Jacquemont's* and the following.

7. **T. abyssinicus,** *Nees ex Steud. Syn. Gram.* 301; dwarf, very slender, spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. 6–8-fld., gl. I very small ovate or subulate-lanceolate unequal or lobulate-sided, II coriaceous linear-oblong 2–3-toothed below the tip, III 2-toothed at the truncate tip, awn minute. T. minimus, *Hochst. ex Steud. l. c.* T. bromoides, *Benth. in Gen. Pl.* iii. 1200; *Duthie Grass N.W. Ind.* 33 (*not of Roth.*). T. festucoides, *Clarke ex Duthie l. c.* Danthonia leptophylla, *A. Rich. Tent. Fl. Abyss.* ii. 421. Festuca filiformis, *Steud. l. c.* Catapodium filiforme, *Nees ex Steud. l. c.* C. fusiforme, *Benth. in Journ. Linn. Soc.* xix. (1881) 128 (*error for filiforme*).

WESTERN HIMALAYA; from Kashmir to Simla, alt. 5–7000 ft., *Royle*, &c. WESTERN PANJAB, *Stewart*, &c.—DISTRIB. Affghan., Tropical Africa.

Stem 6–10 in. *Leaves* 2–6 in., filiform. *Spikelets* always very small and usually rather distant; glumes rather thin, narrow; I membranous, nerve strong; II linear-oblong, with a narrow membranous margin, base bearded, tip sometimes erose and 2-mucronate.

** Fl. glumes 4-fid, outer lobes awned or not, inner membranous sometimes very short or truncate.

8. **T. bromoides,** *Roth. Nov. Sp.* 49; spikes long or short, spikelets $\frac{1}{6}$–$\frac{1}{2}$ in. few- or many-fld., gl. I ovate or lanceolate deeply notched on one side, II oblong-lanceolate bifid with a short awn in the cleft, III with small awned outer lobes broad ovate acute, inner and median awn shorter than the gl. *Wall. Cat.* n. 8887; *Wight Cat.* n. 1793; *Steud. Syn. Gram.* 301; *Stapf in Kew Bullet.* (1891) 85. T. festucoides, *Jaub. & Spach Ill. Fl. Orient.* iv. 49, t. 333. T. Griffithii, *Wight & Arn. ex Wight Cat.* n. 2658; *Nees ex Steud. l. c.* 301. T. lanatus, *Hochst. ex Steud. l. c.* T. Neesianus, *Wight & Arn. ex Wight Cat.* n. 2059. T. zeylanicus, *Nees ex Wight Cat.* n. 2360; *Steud. l. c.*; *Thwaites Enum.* 374; *Trim. Cat. Ceyl. Pl.* 109. Triathera bromoides, *Roth. ex Kunth l. c.* Bromus Myurus & Festuca mysurensis, *Herb. Heyne.* Plagiolytrum calycinum, *Nees in Proc. Linn. Soc.* i. 95; *Wight Cat.* n. 1793 & 2059. Avena mysorensis, *Spreng. Syst.* i. 337.

MALABAR GHATS; from Belgaum southward, alt. 4–7000 ft. CEYLON; in the elevated districts.

Stems 6–18 in., stout or slender. *Leaves* usually short, but sometimes as long as the stem, flat or convolute, and filiform. *Spike* 3–8 in. *Spikelets* very variable, close or distant. *Gls.* I membranous, nerve stout; II membranous, or coriaceous with broad membranous margins, more deeply notched or bifid at the apex than in any other species; III and following bearded at the base, broadly ovate, strongly 3-nerved, cleft half way down, outer lobes small placed low down and margined with their awns half as long as the gl. or longer, inner lobes often half as long as the gl., much larger than in any other species; awn rarely as long as its gl.

Var. *major*, Stapf mss.; stem 2–4 ft., leaves 5–6 in. narrow flat spreading, spike 4–6 in., spikelets ⅔ in. bifarious 16–20-fld.—Nilghiri Hills, Nadavattam, alt. 6000 ft., *Lawson.* Pulney Hills, *Wight.*

Var. *longifolius*; stem 2 ft., leaves filiform as long as the stem, spike 3 in., spikelets ⅓ in. secund 8–10 fld. —Nilghiri and Pulney Hills.

9. **T. filiformis,** *Nees ex Steud. Syn. Gram.* 301; very slender, leaves filiform as long as the stem, spikes 3–10 in., spikelets ⅛–⅓ in., gl. I ovate broadly lobed on one side, II linear-oblong or lanceolate 2-toothed below the tip, III with small shortly awned outer lobes, and short or long obtuse acute or awned inner, median awn twice as long as its gl. or longer. *Duthie Grass. N.W. Ind.* 33. T. semitruncatus, *Nees,* & T. unidentatus, *Nees ex Steud. l. c.*; *Duthie l. c.* Plagiolytrum filiforme and unidentatum, *Nees in Proc. Linn. S.* i. 95. Catapodium filiforme, *Nees ex Duthie l. c.* —Tripogon, *Wall. Cat.* 8888, 8889.

TEMPERATE HIMALAYA, from Dalhousie to Bhotan, alt. 5–10,000 ft. KHASIA HILLS, alt. 5–5500 ft., *Wallich,* &c.

Habit of *T. trifidus* and only to be distinguished by the acute obtuse or awned long or short teeth or lobes between the 3 awns of gl. III, and perhaps only a form of that plant. The longer awns and minute teeth of the top of gl. II best distinguish it from *T. bromoides.*

VAR. *tenuispica*; spike very slender, rachis filiform, spikelets very small pale, awn of gl. III long and slender. Tripogon, *Wall. Cat.* n. 8892.—N.W. Himal., Sikkim and the Khasia Hills.

88. CYNODON, *Pers.*

Perennial creeping grasses. *Leaves* narrow, flat. *Spikelets* minute, 1-fld., 1–2-seriate, unilateral on 3–6 digitate slender spikes, not jointed at the base; rachilla jointed at the base, not produced beyond gl. III or at its back only. *Glumes* 3, I and II empty, thin, keeled, persistent or separately deciduous; III broader, membranous, awnless; palea as long, 2-nerved. *Lodicules* 2, short. *Anthers* large. *Styles* distinct. *Grain* oblong, free within the gls.—Species 4, 3 Australian and the following.

C. dactylon, *Pers. Syn.* i. 85; gl. I and II shorter than III, rachilla produced at the base of gl. III dorsally as a minute bristle. *Kunth Enum. Pl.* i. 259; *Suppl.* 203, t. 16, f. 1; *Reichb. Ic. Fl. Germ.* t. 26; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 19; *Wall. Cat.* n. 3803; *Dalz. & Gibs. Bomb. Fl.* 297; *Griff. Notul.* iii. 50, *Ic. Pl. Asiat.* t. 139, f. 204; *Thwaites Enum. Pl. Zeyl.* 371; *Trim. Cat. Ceyl. Pl.* 109; *Aitchis. Cat. Panjab. Pl.* 160; *Duthie Grass. N.W. Ind.* 32, *Fodd. Grass. N. Ind.* 52; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 366; *Benth. Fl. Hongk.* 428; *Fl. Austral.* vii. 609. C. erectus, *Presl Rel Hænk.* i. 290, *Kunth l. c.* 260. C. filiformis, *Voigt Hort. Suburb. Calc.* 712. C. linearis, *Willd. Enum. Hort. Berol.* 90; *Wight Cat.* n. 1750. C. maritimus, *H. B. & K. Nov. Gen. & Sp.* i. 170. C. occidentalis & portoricensis, *Willd. ex Steud. Nom. Ed.* II. i. 463. C. radiatus, *Roth. Nov. Pl. Sp.* 38; *Kunth l. c.* 260. C. repens, *Dulac Fl. Haut. Pyren.* 76. C. sarmentosus, *S. F. Gray Nat. Arr. Brit. Pl.* ii. 100. C. stellatus, *Willd. Enum. Hort. Berol.* 90; *Kunth l. c.* 260. C. virgatus, *Nees ex Steud. Syn. Gram.* 213. Chloris Cynodon, *Trin. Gram. Unifl.* 229. Chlor. maritima, *Trin. l. c.* 226. Fibichia umbellata, *Koel. Gram. Gall. & Germ.* 308. Dactylon officinale, *Vill. Hist. Pl. Dauph.* ii. 69. Digitaria Dactylon, *Scop. Fl. Carn. Ed.* II. i. 52. D. littoralis, *Salisb. Prodr.* 19. D. maritima & radiata, *Spreng. l. c.* 272. D. stolonifera, *Schrad. Fl. Germ.* i. 165, t. 3, f. 9. Panicum dactylon, *Linn. Sp. Pl.* 58; *Host Gram. Austr.* ii. 15, t. 18; *Sibth. Fl. Græc* 45, t. 60; *Engl. Bot.* t. 840; *Knapp Gram. Britt.* t. 13; *Grah. Cat. Bomb. Pl.* 236; *Roxb. Fl. Ind.* i. 289. P. lineare, *Burm. Fl. Ind.* 25, t. 10, f. 2. Paspalum dactylon, *DC. Fl. Franc.* iii. 16. Pasp. præcox, *Walt. Fl. Carol.* 75. Pasp. umbellatum, *Lam. Illust.* i. 177. Agrostis bermudiana, *Tussac ex Kunth l. c.* 259. A. filiformis, *Koen. ex Kunth l. c.* 261. A. linearis, *Retz. Obs.* iv. 19. A. stellata, *Willd. Sp. Pl.* i. 376.—*Rheede Hort. Mal.* xii. t. 47.

Throughout INDIA, BURMA and CEYLON, ascending to 5000 ft. in the Himalaya. —DISTRIB. All warm countries.

Stem prostrate, often widely creeping and forming matted tufts with short ascending branches. *Leaves* short, subulate, glaucous; ligule hairy. *Spikes* 2–5, 1–2 in., radiating, green or purplish; rachis very slender. *Spikelets* about $\frac{1}{12}$–$\frac{1}{10}$ in.; gl. I and II spreading, ovate, acute, keels scabrid; III much larger cymbiform, keel and margin scabrid. *Grain* laterally compressed.—This plant is absent in Herb. Wallich. (Cat. n. 3803).

89. **CHLORIS**, *Sw.*

Perennial rarely annual grasses. *Leaves* flat or convolute. *Spikelets* 1-fld., 2-seriate, unilateral on solitary geminate fascicled digitate or whorled terminal erect or radiating spikes, not jointed at the base; rachilla jointed at the base, sometimes produced beyond gl. III and bearing one or more empty gls. *Glumes* 3 (with 1 or more upper neuter), I and II unequal, 1-nerved, narrow, keeled, acute mucronate or II awned; III 1–3-nerved, acute obtuse or 2-fid, usually awned; palea rather shorter, 2-nerved, complicate. *Lodicules* 2. *Anthers* small. *Styles* free. *Grain* narrow, free.—Species about 40, warm regions.

This genus is wanting in the Wallichian Herbarium at the Linnean Society.—I find no character by which *Schœnefeldia*, Kunth, can be separated generically from *Chloris*.

* Spikelets 1-fld. with no rudiment of another. Rachis of spike flattened.

1. **C. pallida,** *Hook. f.*; annual, very slender, spikes 1–3 $\frac{1}{5}$ in. broad, awn very long capillary. Schœnefeldia pallida, *Edgew. in Journ As. Soc. Beng.* xxi. (1852) 161, 183; *Aitchis. Cat. Panjab Pl.* 166; *Duthie Grass. N.W. Ind.* 32, *Fodd. Grass. N. Ind.* 52, t. 64. S. gracilis, *Kunth Revis. Gram.* i. 283, t. 53; *Enum. Pl.* i. 258; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 365.

BUNDELKUND, *Edgeworth*. CENTRAL INDIA, *King*.

Stem 10–18 in., simple or branched, almost filiform. *Leaves* 6–8 in., very narrow, flaccid, tips capillary; ligule a few hairs. *Spike* 3–5 in., golden-yellow, erect; rachis flattened, serrulate. *Spikelets* $\frac{1}{12}$ in., subsessile, gl. I and II ovate-lanceolate, subaristately acuminate, 1-nerved, keels ciliate; I $\frac{1}{4}$ shorter than II; III rather longer than I, sessile, ovate, 1-nerved, hairy, base bearded, tip minutely notched; awn $\frac{2}{3}$–1 in. long, capillary, curved; palea narrow, keels ciliate, tip 2-toothed. *Grain* very slender, acute, pericarp loose.—I have seen no authentic specimen of Edgeworth's plant, but have received one so named from Dr. King. It agrees with Edgeworth's characters except in respect of an obscure passage in that author's description which reads as if gl. III was much shorter than II.

2. **C. myosuroides,** *Hook. f.*; annual, spikes solitary or geminate $\frac{1}{8}$ in. broad, awn very long capillary.

GANGETIC PLAIN; ravines near Etawah, *Duthie.*

A much smaller plant than *C. pallida*, 6–12 in. high, with very narrow spikes 2–3 in. long, often recurved, smaller spikelets and shorter awns, $\frac{1}{4}$–$\frac{2}{3}$ in. long, but perhaps only a variety.

** Spikelets 1-fld., rachilla produced beyond the flg. gl. and bearing one or two awns. Rachis of spike terete or angular.

3. **C. delicatula,** *Clarke mss.*; annual, spikes 5–10 capillary 1$\frac{1}{2}$–2 in. long alternate on the tip of the stem, awns $\frac{1}{8}$–$\frac{1}{6}$ in. straight.

CHOTA NAGPORE; Mandu, Hazarabagh, *Clarke.* Pegu-Yomah, *Herb. Kurz.*

Stem 3–12 in., erect, slender, wiry, subsimple. *Leaves* $\frac{1}{2}$–1 in., all cauline, spreading, subulate, concave or convolute; ligule of hairs. *Spikes* erect. *Spikelets* about $\frac{1}{10}$–$\frac{1}{8}$ in.; gl. I very narrow, almost subulate; II $\frac{1}{3}$ longer, rather broader, both setaceously acuminate, keels scaberulous; III oblong, finely hairy, tip 2-lobed; rachilla produced and half as long as the gl., bearing 2–3 capillary awns; palea narrow, 2-toothed, keels glabrous. *Grain* very narrow, cylindric.—The Pegu specimens are larger than Clarke's.

4. **C. incompleta,** *Roth. Nov. Sp.* 60; tall, perennial, spikes 4–10 whorled 4–6 in. long, awns $\frac{1}{4}$ in. straight. *Steud. Syn. Gram.* 207. C. digitata, *Steud. l. c.*; *Duthie Grass. N.W. Ind.* 23; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 369 (*excl. Syn.*). C. radiata, *Heyne ex Roth. l. c.* 61; *Thw. Enum. Pl. Zeyl.* 371; *Trim. Cat. Ceyl. Pl.* 409. C. Roxburghii, *Edgew. in Journ. As. Soc. Beng.* xxi. (1853) 160, 183; *Duthie Fodd. Grass. N. Ind.* 54, t. 65; *Lisboa l. c.* 368. C. tetrameris, *Trin. Gram. Unifl.* 235; *Steud. l. c.* 206. Digitaria elongata, *Spreng. Syst.* i. 271. Gymnopogon digitatus, *Nees in Wight Cat.* n. 1753; *Steud. Nom. Ed.* II. i. 713. Melica digitata, *Roxb. Fl. Ind.* i. 326; *Kunth Enum. Pl.* i. 37. Ctenium digitatum, *Spreng. Syst.* i. 274. Cynodon elongatus, *Trin. in Spreng. N. Entdeck.* ii. 64; *Kunth l. c.* Agrostis filiformis, *Koenig in Herb. Banks. ex Trin. l. c.*

Throughout the PLAINS of INDIA, from the Panjab to Burma and southward. CEYLON. ANDAMAN ISLDS., *Kurz.*—DISTRIB. Affghan., China.

Stem 2–3 ft., or more, stout or slender, often branched, straight or geniculate. *Leaves* 6–12 by $\frac{1}{6}$–$\frac{1}{2}$ in., flat; ligule of long hairs. *Spikes* very slender, spreading. *Spikelets* very variable, $\frac{1}{8}$–$\frac{1}{5}$ in., narrowly lanceolate, green; gl. I not $\frac{1}{4}$ of II which is narrowly lanceolate notched and shortly awned at the tip; III as long as II, ovate-lanceolate, tip 2-toothed, base bearded; palea very narrow, keels nearly smooth; rachilla produced to half the length of the gl., bearing a very minute long awned gl. that is bearded at the base.

*** Spikelets 1-fld.; rachilla produced beyond the flg. gl., and bearing 1–3 reduced empty gls. (In *C. villosa*, the gl. IV contains imperfect anthers.)

† *Spikes* 1–3; *gl. III broadly cuneiform.*

5. **C. tenella,** *Roxb. Fl. Ind.* i. 329; annual, slender, spike solitary, spikelets 3–4-awned, gl. III broadly cuneiform, upper margin truncate naked. *Kunth Enum. Pl.* i. 267; *Spreng. Neue Entdeck.* iii. 126; *Steud.*

Syn. Gram. 204; *Dalz. & Gibs. Bomb. Fl.* 296; ? *Duthie Fodd. Grass. N. Ind.* 54, t. 66; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 368. C. triangulata, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 409; *Steud. l. c.* 203; *Duthie Grass. N.W. Ind.* 33. Ctenium indicum, *Spreng. Syst.* i. 274. Tetrapogon triangularis, *Hochst. Pl. Arab. Schweinf.* n. 967.

Rajpootana; Oodeypore, *Wingate* (*Herb. Duthie*). Scind, *Stocks*. Khandeish, *Dalzell*. South India, *Roxburgh, Wight*.—Distrib. Arabia, Abyssinia.

Stem 10–18 in., weak, branched from the base. *Leaves* 6–10 by ⅛–¼ in., flaccid; ligule short, truncate. *Spike* 1–2½ in., erect, flat. *Spikelets* large, ⅙ in. long and more, bifarious; gls. 5 or 6, I and II ovate-lanceolate, hyaline; I acute; II ⅓ longer, shortly awned; III as long as II, coriaceous, nerves distant from the margin and keel villous; awn subdorsal, straight, spreading; keels of palea finely hairy; IV half as long as III, narrower; V and VI still smaller, fan-shaped, awned.

†† *Spikes* 1–3; *gl. III ovoid, hirsute all over.*

6. **C. villosa,** *Pers. Syn.* i. 87; perennial, stout, spikes 1–3, spikelets 4-awned, gl. III ovoid acute hirsute all over with long hairs, margins hyaline. *Kunth Enum. Pl.* i. 267, *Suppl.* 217, t. 16, f. 3; *Jaub. & Spach Ill. Pl. Orient.* iv. 40, t. 327; *Coss. & Dur. Fl. Alger.* 87; *Steud. Syn. Gram.* 204; *Aitchis. Cat. Panjab Pl.* 167. C. tetrapogon, *Beauv. Agrost.* 158. Tetrapogon villosus, *Desf. Fl. Atlant.* ii. 388, t. 255; *Trin. Fund. Agrost.* 760; *Boiss. Fl. Orient.* v. 555; *Duthie Grass. N.W. Ind.* 33, *Fodd. Grass. N. Ind.* 55, t. 68.

The Panjab; Peshawur, *Stewart*; Rawul Pindu, *Aitchison*. Rajpootana; Oodeypore, *King*. Multan, *Edgeworth*.—Distrib. Westward to the Canaries.

Stem 6–10 in., from a densely-tufted stout woody base, which is clothed with equitant leaf-sheaths. *Leaves* 1–3 in., very narrow, acute, flat or twisted, rigid; ligule obscure. *Spikes* 1½–2½ in. by ⅓–½ in. broad, erect, pale yellow. *Spikelets* ⅙ in., obconic; gls 5, I and II lanceolate, shortly awned; I acuminate; II ⅓–¼ longer, tip 2-toothed; III about as long as II, coriaceous, with broad hyaline margins bounded by the lateral nerves, imperfectly triandrous, tip entire or minutely 2-toothed, hairs much longer than the gl. silky; awn spreading, keels of palea scaberulous; IV not half as long as III, also hirsute; V very small, cuneate; VI reduced to an awn.

††† *Spikes* 4–10; *gl. III bearded at the base and on the margins above the middle.*

7. **C. virgata,** *Sw. Fl. Ind. Occ.* i. 203; spikes 6–9, spikelets 2-awned, gl. II tip 2-fid awned in the sinus, III ovate bearded with long hairs above the middle, IV narrowly cuneiform. *Trin. Gram. Unifl.* 136; *Doell in Mart. Fl. Bras.* ii. III. C. compressa, *DC. Cat. Hort. Monsp.* (1813) 94; *Trin. Gram. Unifl.* 230; *Nees Agrost. Bras.* 421, *Fl. Afr. Austr.* 240; *Steud. Syn. Gram.* 204. C. caudata, *Trin. ex Bunge Enum. Pl. Chin. Bor.* 70. C. cryptostachys, *Steud. in Schmidt Fl. Cap. Virid.* 148. C. decora, *Nees in Herb. Royle*; *Steud. l. c.* 205. C. elegans, *Kunth Enum. Pl.* i. 264. C. meccana, *Hochst. & Steud. ex Schult. Ind. Sem. Hort. Hal.* (1843) 7; *Steud. l. c.*; *Boiss. Fl. Orient.* v. 554; *Duthie Grass. N.W. Ind.* 33. C. montana, *Griseb. in Goett. Nachr.* (1868) 84, *Abhandl.* 300; *Duthie l. c.* (*non Roxb*). C. pallida, *Link Hort. Berol.* i. 56, ii. 223. C. penicillata, *Hort. ex Nees l. c.* (*non Poir.*). C. polydactyla, *Durand Diss. Chlorid.* (1808) 14, 22; *Jacq. Eclog. Gram.* 12, t. 9 (*non Sw.*). C. tetrastachys, *Hack. mss.* (*ex Herb. Duthie*). Heterolepis elegans, *Ehrt. ex Boiss. l. c.*; Rabdochloa virgata, *Beauv. Agrost.* 84.—Chloris, *Wall. Cat.* 3212 (*in Herb Benth.*).

RAJPOOTANA, and UPPER and LOWER GANGETIC PLAINS, and southward to BEHAR, and CENTRAL and SOUTHERN INDIA. WESTERN TIBET, *Thomson*. BURMA, *Wallich*.—DISTRIB. Westward to Algeria; China, Mongolia, Trop. and S. Africa and America.

Stem rather stout, flattened, 8–12 in. high, usually leafy, decumbent and much proliferously branched below. *Leaves* rather broad, flat, acute; upper sheaths more or less inflated.—Australian specimen of this in Herb. Kew from Mueller, are ticketed *C. barbata*, Muell., var. with one empty gl. The Western Tibet habitat is remarkable; there are two specimens collected by Thomson, dated by himself at a time he was in Ladak, at an elevation not less than 12,000 ft.

8. **C. barbata,** *Sw. Fl. Ind. Occ.* i. 200; spikes 4–20, rachis scaberulous, spikelets 3-awned. *Jacq. Eclog. Gram.* 10, t. 8; *Kunth Enum. Pl.* i. 264, *Suppl.* 209; *Durand de Chlorid.* 13, 22; *Trin. Diss.* i. 232, *Sp. Gram. Ic.* t. 306; *Nees Agrost. Bras.* 421; *Steud. Syn. Gram.* 204; *Roxb. Fl. Ind.* i. 331; *Grah. Cat. Bomb. Pl.* 234; *Wight Cat.* n. 1764; *Aitch. Cat. Panjab Pl.* 167; *Thw. Enum. Pl. Zeyl.* 371; *Trim. Cat. Ceyl. Pl.* 109; *Duthie Grass. N.W. Ind.* 33, *Fodd Grass. N. Ind.* 53, t. 34; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 367; *Griseb. Fl. Brit. W. Ind.* 539; *Benth. Fl. Hongk.* 429, *Fl. Austral.* vii. 613 (*excl. Syn.* decora); *Doell in Mart. Fl. Bras.* ii. III. 67. Andropogon barbatus, *Linn. Pl. Jam. Pugill.* 30, *Mant.* ii. 302.—Chloris, *Wall. Cat.* n. 3812.—*Rheede Hort. Mal.* xii. t. 51.

Throughout the plains of INDIA, BURMA, and CEYLON.—DISTRIB. Tropics generally.

Stem 1–3 ft., stout, erect from a geniculate or from a creeping proliferously branched base, simple or branching above, nodes with often large tufts of leaves having compressed equitant sheaths. *Leaves* 6–18 long, flat; mouth of sheaths ciliate; ligule obscure. *Spikes* ½–4 in., suberect, strict or flexuous. *Spikelets* $\frac{1}{10}$–$\frac{1}{8}$ in., green or red-purple; gls. I and II acuminate, II much the longest; III ovate, more or less densely bearded above the middle and dorsally, tip acute or notched; awn ¼–⅓ in.; III cuneiform, at length globose, ciliate; IV much smaller, globose, awned.—Extremely variable in size and habit.

9. **C. polystachya,** *Roxb. Fl. Ind.* i. 330; spikes many, rachis glabrous, spikelets very minute 3-awned. *Kunth Enum. Pl.* i. 265; *Spreng. Neue Entdeck.* iii. 127; *Grah. Cat. Bomb. Pl.* 235; *Wight Cat.* n. 1763; *Duthie Grass. N.W. Ind.* 33, C. Roxburghiana, *Schult. Mant.* ii. 239; *Steud. Syn. Gram.* 206.—Chloris, *Wall. Cat.* n. 3811 (*ex Wight l. c.*).

DECCAN PENINSULA, *Roxburgh*, *Wight*.

Stem 1–2 ft., ascending from a procumbent base. *Spikes* about 16, 2–3 in. long; gls. I and II lanceolate, acuminate; II much the longest; III ovate, acute, margins ciliate above or nearly glabrous; awn flexuous, IV like III but very much smaller, glabrous; V a minute-awned gl.—Wight's is the only specimen I have seen, it is very much smaller than in Roxburgh's drawing.

10. **C. montana,** *Roxb. Fl. Ind.* i. 329; spikes 2–6, rachis glabrous, spikelets 4-awned. *Kunth Enum. Pl.* i. 265; *Spreng. Neue Entdeck.* iii. 127; *Steud. Syn. Gram.* 204; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 369. C. decora, *Thw. Enum.* 371 (*excl. syn.*). C. barbata, *var.* decora, *Trim. Cat. Ceyl. Pl.* 109. Tetrapogon tetrastachys, *Hack. in Herb. Duthie* (*in part*) n. 7759. Andropogon tetra-aristatus, *Roxb. Ic. ined.* n. 882.—Chloris, *Wall. Cat.* n. 3810.

Mountain districts of COROMANDEL, *Roxburgh*. UPPER and LOWER GANGETIC PLAINS, and southward to CEYLON.

Stem erect or geniculately ascending from a creeping base, 4 in. to 2½ ft., simple or branched. *Leaves* 3–8 in., narrow, finely acuminate; mouth of sheath ciliate; ligule very short. *Spikes* 1–3 in., erect, very pale. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in.; gl. I and II both finely acuminate, or II which is much the largest obtuse and shortly awned; III ovoid, acute, upper margins more or less thickly bearded; IV and V cuneiform, glabrous or ciliate; VI minute, awned.—Very variable in the length of the spikes and size of the spikelets.

11. **C. Wightiana,** *Nees in Wight Cat.* n. 1766; *Steud. Syn. Gram.* 206; spikes 3–5, rachis villous, spikelets 4-awned.—Chloris, *Wall. Cat.* n. 3809.

SOUTHERN INDIA, *Wight.*

Stem 4–6 in., stout, much branched, decumbent and leafy below, sometimes creeping. *Leaves* 2–4 by $\frac{1}{8}$–$\frac{1}{6}$ in., flat, linear, acuminate and sheaths pubescent; ligule of hairs. *Spikes* red-brown, stout. *Spikelets,* gl. I and II ovate-lanceolate; I acuminate; II $\frac{1}{4}$ longer, tip notched mucronate; III as long as II, obliquely broadly ovate in profile, suddenly narrowed into the terminal awn, lateral nerves marginal above and keel villously bearded; palea very broad, keels ciliate; IV like III but smaller; V subglobose, glabrous, VI very minute.

DOUBTFUL AND REJECTED SPECIES.

C. MONOSTACHYA, *Poir. Encycl. Suppl.* ii. 238.—C. distachya (*Kunth Rev. Gram.* i. 291, t. 57. Eleusine monostachya, *Spreng. Syst.* i. 249. Leptochloa? monostachya, *Reaum. & Sch. Syst.* ii. 580. Cynosurus monostachyas, *Vahl Symb.* ii. 20) is a Mauritian grass, not found hitherto in India.

C. PENICILLATA, *Pers. Syn.* i. 87; *Kunth Enum. Pl.* i. 268; *Steud. Syn. Gram* 206. Cynosurus penicillatus, *Vahl Symb.* ii. 21. Eleusine penicillata, *Spreng. Syst.* i. 350.—Vahl's description does not enable me to identify this.

90. ELEUSINE, *Gaertn.*

Annual or perennial grasses. *Leaves* long or short. *Spikelets* 3–12-fld. (fl. all but terminal perfect) sessile, 2–3-seriate and secund, forming digitate capitate or whorled spikes, laterally compressed, not jointed at the base; rachilla continuous between the fl. glumes. *Glumes* few or many, keeled, I and II shorter than the flg., subequal or unequal, persistent; I lanceolate; II lanceolate, acute or acuminate, or very broadly ovate, or didymous with a short stout recurved awn; flg. gls. like the empty 3-nerved; palea complicate, keels strong. *Lodicules* 2, cuneate. *Anthers* 3, short. *Styles* short, distinct. *Grain* free, pericarp hyaline, loose. *Seed* rugose.—Species about 7, all warm countries.

The specimens of this genus are absent from the Wallichian Herbarium in the Linnean Society's rooms; the tickets alone existing there.

I. ELEUSINE proper. *Spikelets* densely imbricate, pointing forward. Gl. II obtuse acute or acuminate.

1. **E. indica,** *Gærtn. Fruct.* i. 8; annual, erect, leaves flat, spikes digitate elongate, glumes subacute glabrous. *Lamk. Ill.* i. 203, t. 48; *Kunth Enum. Pl.* i. 273, *Suppl.* 224, t. 16, f. 4; *Steud. Syn. Gram.* 211; *Roxb. Fl. Ind.* i. 345; *Grah. Cat. Bomb. Pl.* 235; *Griff. Notul.* iii. 52, 53, *Ic. Pl. Asiat.* t. 119, f. 156 & t. 150, f. 1; *Thw. Enum. Pl. Zeylan.* 371; *Trimen Cat. Ceyl. Pl.* 109; *Aitchis. Cat. Panjab Pl.* 168; *Duthie Grass. N.W. Ind.* 34, *Fodd. Grass. N. Ind.* 57, t. 69; *Miq. Fl. Ind. Bat.* iii. 385; *Wall. Cat.* n. 3816; *Wight Cat.* n. 1758; *Boiss. Fl. Orient.* v. 555; *Benth. Fl. Hongk.* 429, *Fl. Austral.* vii. 615; *Nees Agrost. Bras.* 439, *Fl. Afr. Austr.* 251; *Griseb. Fl. Brit. W. Ind.* 540. E. distachya, *Trin. ex Steud.*

Nom. Ed. II. i. 549. E. distans, *Mœnch. Meth.* 210. E. domingensis, *Sieb. ex Schult Mant.* ii. 323. E. Gouini, inæqualis, rigidifolia, & scabra, *Fourn. ex Hemsl. Biol. Centr. Amer.* iii. 565. E. gracilis, *Salisb. Prodr.* 19. E. marginata, *Lindl. in Mitch. Three Exped.* i. 319; *Steud. Syn. Gram.* 212. E. tristachya, *Lamk. l. c.*; *Kunth Revis. Gram.* i. 92, *Enum.* i. 273; *Steud. l. c.* Cynosurus indicus, *Linn. Sp. Pl.* 72. C. Ara, *Herb. Ham. ex Wall. Cat.* n. 3816 I. ?C. pectinatus, *Lamk Encycl.* ii. 188. ?Leptochloa pectinata, *Kunth Revis. Gram.* i. 91, *Enum. Pl.* 272; *Steud. l. c.* 210. Panicum compressum, *Forsk. Fl. Æg. Arab.* 18. Paspalum dissectum, *Kniphof. Cent. Bot. in Orig.* t. 11. Triticum geminatum, *Spreng. Syst.* i. 326. Agropyrum geminatum, *Schult. Mant.* iii. 655.—*Rheede Hort. Mal.* xii. t. 69.

Throughout the low country of INDIA (ascending to 5000 ft. in the Himalaya) to PENANG and CEYLON.—DISTRIB. Tropical Old World; introd. into the New.

Stem 1-2 ft., stout, soft. *Leaves* distichous, narrow, flaccid, acuminate; sheaths flattened, ciliate; ligule obsolete. *Spikes* 5–7, 2–5 in. long, all in a terminal whorl, or with sometimes 1 or 2 lower down. *Spikelets* very variable in size, $\frac{1}{12}$–$\frac{1}{6}$ in., 3–5-fld.; quite glabrous; gl. I small, 1-nerved; II 3-nerved; III and succeeding ovate, subacute. *Grain* oblong; pericarp loose, but persistent; seed oblong rugose.

CULT. FORM. E. CORACANA, *Gaertn. Fruct.* i. 8, t. 1; stem stout 2–5 ft. often as thick as the thumb, leaves broad, spikes very stout up to 6 in. long by ½ in. broad straight or incurved, grain globose. *Lamk. Illustr.* t. 28; *Schreb. Gram.* ii. t. 35; *Trin. Sp. Gram. Ic.* t. 70; *Steud. Syn. Gram.* 211; *Panz. in Muench. Denkschr.* iv. (1814) t. 8; *Nees Fl. Afr. Austr.* 251; *Kunth Enum. Pl.* i. 273, *Suppl.* 225; *Roxb. Fl. Ind.* i. 342; *Wall. Cat.* n. 3817; *Grah. Cat. Bomb. Pl.* 235; *Aitchis. Cat. Panjab Pl.* 168; *Trim. Cat. Ceyl. Pl.* 109; *Duthie Grass. N.W. Ind.* 34, *Fodd. Grass. N. Ind* 57, t. 69, *Field & Gard. Crops*, 15, t. 28; *Miquel Fl. Ind. Bat.* iii. 386; *Lisboa in Journ. Bomb. Nat Hist. Soc.* vii. (1893) 373. E. cerealis, *Salisb. Prodr.* 19. E. sphærosperma, *Stokes Bot. Mat. Med.* i. 149. E. stricta, *Roxb. l. c.* 343; *Kunth l. c.*; *Steud. l. c.* E. Tocussa, *Fresen. in Mus. Senkenb.* ii. (1837) 141. Cynosurus coracanus, *Linn. Syst. Ed.* II. 875.—*Rheede Hort. Mal.* xii. t. 78.—Cultivated in all parts of India.

2. **E. flagellifera,** *Nees in Linnæa*, xvi. (1842) 220; perennial, prostrate, proliferously branched, leaves very short glaucous, spikes digitate, gl. II lanceolate mucronate or aristulate, III hairy acute. *Steud. Syn. Gram.* 211; *Duthie Grass. N.W. Ind.* 34, *Fodd. Grass. N. Ind.* 57, t. 37; *Boiss. Fl. Orient.* v. 655. E. arabica, *Hochst. ex Steud. l. c.*; *Aitchis. Cat. Panjab Pl.* 167; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 377. E.? stolonifera, *Br. in Salt Abyss. App.* 63. ? Ochthocloa dactyloides, *Edgew. in Journ. As. Soc. Beng.* xi. (1842) 27.

PLAINS of the PANJAB, *Royle, Jacquemont*, &c. SCIND, *Stocks*, &c.—DISTRIB. Affghan. and westward to N. Africa.

Stems stout or slender, smooth, stiff, widely spreading, rooting at the distant thickened leafy nodes, and sending up slender branches; internodes 4–8 in. *Leaves* ½–1½ in., rigid, recurved, flat or tortuous; ligule hairy. *Spikes* 3–6, 1–1½ in. long, very variable in breadth, $\frac{1}{6}$–$\frac{1}{3}$ in.; rachis pubescent. *Spikelets* imbricate, subpedicelled, $\frac{1}{8}$–$\frac{1}{3}$ in. long, 4–6-fld., green or brownish; gl. I small, ovate, acute, membranous; II twice as large, coriaceous with membranous margins; III ovate-lanceolate, acuminate, chartaceous, 3-nerved, mid-nerve compound, sides and membranous margins below hairy; palea elliptic-oblong, keels hairy.—*Ochthocloa dactyloides*, Edgew., is a doubtful plant of which I have seen no specimens. It is not included in any of Duthie's works on the Grasses of N.W. India. It might be traced by its habitat. Loodiana, Jassowala, on tumuli with *Capparis aphylla*.

3. **E. brevifolia,** *Br. in Wall. Cat.* n. 3815; annual, stems short

creeping and rooting, leaves small lanceolate acuminate, spikes very many short crowded in globose heads, flg. gls. and palea villously bearded. E. oligostachya, *Herb. Wight*, n. 3332. E. Wallichii, *Munro mss.* Koeleria brevifolia, *Spreng. Pugill.* ii. 21. K. lagopoides, *Panz. ex Spreng. l. c.* Dactylis brevifolia, *Koen. ex Willd. Sp. Pl.* i. 410 (*excl. Syn.*); *Roxb. Fl. Ind.* i. 341; ?*Steud. Syn. Gram.* 298. D. cynosuroides, *Koen. ex Roth. Nov. Sp.* 74 (*non Linn.*). D. geniculata, *Roxb. Ic. Pict. ined.* t. 346 (*non Burm.*). Poa brevifolia, *Kunth Revis. Gram.* i. 111, *Enum. Pl.* i. 324. P. lagopoides, *Nees ex Wight Cat.* n. 1790. Æluropus brevifolius, *Nees ex Steud. Nom. Ed.* II. i. 30; *Herb. Wight Prop.* 1792. Æ. lævis, *Trin. Fund. Agrost.* 143, t. 12. Æ. pubescens, *Steud. Nom. l. c.* Eragrostis brevifolia, *Benth. in Hook. Ic. Pl.* xiv. 51. Triodia cynosuroides, *Spreng. Syst. Veg.* i. 331. Cyperus Coracana, *Herb. Heyne ex Wall. l. c.*

Sandy shores of the Coromandel and Carnatic coasts, *Heyne*, &c.

Annual. *Stems* many, spreading from the root, 2–4 in. long, stout or slender. *Leaves* 1–2 in., flaccid or rigid, lanceolate, acuminate, serrulate; ligule obsolete. *Heads of spikes* quite globose, $\frac{1}{2}$–$\frac{2}{3}$ in. diam., of many (rarely few) 4–10-fld. ovate sessile spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. long; gl. I and II subequal, margins hyaline, broadly ovate, acuminate or cuspidate, glabrous; I 1–3-nerved; II 3-5-nerved, nerves close to the middle line; III and following very broadly ovate, cuspidately acuminate, 3-nerved, keel and nerves and keels of ovate palea all villous below the middle. *Anthers* minute. *Styles* long, slender. *Grain* orbicular.—See remarks under *Æluropus.*

4. **E. verticillata,** *Roxb. Fl. Ind.* i. 346; annual, erect, leaves flat, spikes scattered or whorled very many-fld., glumes acute glabrous. *Steud. Syn. Gram.* 211; *Aitchis. Cat. Punjab Pl.* 168; *Duthie Grass. N.W. Ind.* 34, *Fodd. Grass. N. Ind.* 58. t. 70; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 377; *Benth. Fl. Austral.* vii. 616. E. racemosa, *Heyne in Roth. Nov. Sp.* 80. Leptochloa? racemosa & verticillata, *Kunth Revis. Gram.* i. 91, *Enum. Pl.* i. 272; *Steud. l. c.* Aerachne eleusinoides, *Wight & Arn. in Wight Cat.* n. 1760; *Nees ex Steud. l. c.* A. verticillata, *Lindl. Introd. Nat. Syst. Ed.* II. 381.—Eragrostidi affine, *Wall. Cat.* n. 3882, *ex Wight Cat. l. c.*

Plains of India; in pasture ground, *Roxburgh*, &c. Kashmir, *Clarke.*—Distrib. Trop. Asia, Africa, and Australia.

Stem 1–3 ft., stout or slender, simple or branched, soft. *Leaves* rather broad, flaccid, acuminate, glabrous; sheath compressed; ligule a few hairs. *Spikes* few or many, $\frac{1}{2}$–3 in. long, in tiers or whorls, or opposite or alternate, suberect; rachis slender. *Spikelets* $\frac{1}{6}$–$\frac{1}{4}$ in., 8–12-fld., shining; glumes small; I and II broadly ovate, finely acuminate or aristulate; flg. gls. $\frac{1}{12}$ in., very broadly ovate, 3-nerved, keel excurrent, lateral nerves ending in small teeth. *Grain* rugose, pericarp caducous.

II. Dactyloctenium, *Willd.* (Gen.). *Spikelets* erect, at right angles to the rachis of the spike. *Glume* II short, suborbicular, abruptly shortly awned.

5. **E. ægyptiaca,** *Desf. Fl. Atlant.* i. 85; annual, leaves flat, spikes digitate, glumes rigid cuspidate glabrous. *Roxb. Fl. Ind.* i. 344; *Wall. Cat.* n. 3818; *Griff. Notul.* iii 51, *Ic. Pl. Asiat.* t. 139, f. 79; *Trim. Cat. Ceyl. Pl.* 109; *Benth. Fl. Austral.* vii. 615; *Duthie Grass. N.W. Ind.* 34, *Fodd. Grass. N. Ind.* 56, t. 35. E. ciliata, *Rafin. in Desv. Journ. Bot.* iv. (1814) 273. E. cruciata, *Lamk. Illustr.* i. 203, t. 48, f. 2. E. mucronata, *Stokes Mat. Med.* i. 150; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 376. E. pectinata, *Moench Meth. Suppl.* 68. E. prostrata, *Spreng. Syst.* i. 350.

E. radulans, *Br. Prodr.* 186. Dactyloctenium ægyptiacum, *Willd. Enum. Hort. Berol.* 1029; *Beauv. Agrost.* 72, t. 15, f. 2; *Kunth Enum. Pl.* i. 261, *Suppl.* ii. 204: *Steud. Syn. Gram.* 211; *Grah. Cat. Bomb. Pl.* 235; *Dalz. & Gibs. Bomb. Fl.* 297; *Thw. Enum. Pl. Zeyl.* 371; *Aitch. Cat. Panjab Pl.* 167; *Miq. Fl. Ind. Bat.* iii. 384; *Boiss. Fl. Orient.* v. 556; *Griseb. Fl. Brit. W. Ind.* 540; *Baker Fl. Maurit.* 452. D. distachyum, *Bojer Hort. Maurit.* 370. D. Figarei, *Notar. in Ann. Sc. Nat. Ser.* III. ix. (1848) 325. D. meridionale, *Ham. Prodr. Pl. Ind. Occ.* 6. D. mucronatum, *Willd. l. c.*; *Trin. Sp. Gram. Ic.* t. 69; *Steud. l. c.*; *Wight Cat.* n. 1761. D. prostratum, *Willd. l. c.*; *Steud. l. c.* D. radulans, *Beauv. Agrost.* 72; *Kunth l. l. c. c.* 262, 204; *Steud. l. c.* Cynosurus ægyptius, *Linn. Sp. Pl.* 72. C. Cavara & Macara, *Hb. Ham. ex Wall. l. c.* B. C. C. distachyus, *Rottl. ex Steud. Nom. Ed.* II. i. 465. Chloris mucronata, *Mich. Fl. Am. Bor.* i. 59. Cenchrus ægyptius, *Beauv. Agrost.* 157. Rhabdochloa mucronata, *Beauv. l. c.* 84. Ægilops saccharinus, *Walt. Fl. Carol.* i. 249.—*Rheede Hort. Mal.* xii. t. 69.

Throughout the low country of India and Burma, to Malacca and Ceylon.—Distrib. Warm regions of the Old World, introd. into the New.

Stem erect, 6–18 in. high, or prostrate spreading and rooting, often proliferously branched at the thickened nodes. *Leaves* distichous, acute or acuminate, ciliate; sheaths compressed; ligule 0. *Spikes* solitary or 2–5, $\frac{1}{2}$–1 in. long, all terminal, stout, rachis mucronate at the tip by the thickened excurrent midrib. *Spikelets* densely crowded, $\frac{1}{22}$–$\frac{1}{10}$ in. long, 3–4-fld., glabrous; glumes almost pungent; I ovate, acute; II broadly ovate, obliquely cuspidately awned, as are the following, cusps recurved; palea very broad, 2-fid, keels hispid. *Grain* globose, very rough, pericarp evanescent.—Specimens in Herb. Rottler named "*Cynosurus ciliaris, C. distachyus*, nob, an *C. ægyptii*, var.:—sandy shores of the Ocean," are somewhat intermediate between *ægyptiaca* and *aristata*, having the foliage of the former and habit of the latter. This and Wight's n. 1761 b. "*Dactyloct. mucronatum, β. repens = D. prostratum*, Willd.," are the same.

6. **E. aristata**, *Ehrenb. ex Boiss. Fl. Orient.* v. 557; perennial, slender, prostrate, proliferously branched, leaves short glaucous, spikes very short capitate, gl. II abruptly shortly awned. E. glaucophylla, *Munro ex Benth. in Journ. Linn. Soc.* xix. (1881) 107. E. scindica, *Duthie Fodd. Grass. N. Ind.* 58, t. 36; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 377. Dactyloctenium glaucophyllum, *Courb. in Ann. Sc. Nat. Ser.* IV. xviii. (1862) 133. D. scindicum, *Boiss. Diagn. Ser.* II. iv. 131, *Fl. Orient. l. c.*

The Panjab, Rajpootana, Malwa, Scind, and British Beluchistan.—Distrib. Affghan., Arabia, Nubia.

Stem smooth, stiff, widely spreading, rooting at the distant thickened woody leafy nodes, and sending up very slender branches 4–12 in. long; internodes 2–4 in. *Leaves* 1–1$\frac{1}{2}$ in., acuminate or pungent, margins ciliate with long tubercle-based hairs; basal sheaths hairy; ligule obsolete. *Spikes* 3 or more, $\frac{1}{4}$–$\frac{1}{2}$ in. long, spreading or decurved, ciliate or bearded at the base, midrib of rachis excurrent. *Spikelets* short, 3–4-fld., rachilla glabrous; gl. I and II coriaceous, 1-nerved, margins membranous, I small, broadly oblong, apiculate; II very broad, sometimes didymous when spread open; awn stout, subulate, incurved or recurved; III and following longer than II, very broadly ovate, subacute, glabrous; palea broad, keels scaberulous. *Grain* ovoid, rugose.—Habit of *E. flagellifera.*

91. **DINEBRA**, *Jacq.*

An annual leafy grass. *Leaves* flat. *Spikelets* 2–3-fld., small, crowded, biseriate on one side of slender spreading or deflexed spikes that are collected in narrow pyramidal racemes, not jointed at the base; rachilla slender, jointed at the base, produced beyond the fl. gls. and bearing an imperfect gl. *Glumes* 4–5, I and II empty, persistent, much longer than III and IV, lanceolate, awned, 1-nerved, keeled; II $\frac{1}{4}$ longer than I; III and IV very small, broadly ovate, subacute, hyaline, 1-nerved; palea hyaline. *Lodicules* 2. *Anthers* 3, small. *Styles* free. *Grain* ovoid, trigonous, wrinkled, free.

D. arabica, *Jacq. Fragment.* 77, t. 121, f. 1; *Beauv. Agrost.* 98, t. 16, f. 2 (Dineba); *Trim. Cat. Ceyl. Pl.* 109; *Duthie Grass. N.W. Ind.* 34, *Fodd. Grass. N. Ind.* 55; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 372. D. ægyptiaca, *Del. Fl. Ægypt.* 25, t. xi. f. 3 (Dinaeba). D. retroflexa, *Panz. in Denksch. Acad. Muench.* iv. (1813) t. 12; *Boiss. Fl. Orient.* v. 557. Leptochloa arabica, *Kunth Revis. Gram.* i. 91; *Enum. Pl.* i. 271, *Suppl.* 221; *Wight Cat.* n. 1756; *Aitch. Cat. Panjab Pl.* 167. L. calycina, *Kunth l. l. c. c.* 91, 272; *Steud. l. c.* 210; *Dalz. & Gibs. Bomb. Fl.* 297. L. coromandeliana, *Steud. l. c.* 209. Eleusine calycina, *Roxb. Fl. Ind.* i. 346. Cynosurus coromandelianus, *Herb. Rottl.* C. paniculatus, *Herb. Roxb.* C. retroflexus, *Vahl Symb.* ii. 20. Dactylis paspaloides, *Willd. Enum. Hort. Berol.* 111. D. cynosuroides, *Koen. mss. in Herb. Mus. Britt.* D. madraspatensis, *Herb. Roxb.*—Dinebra, *Wall. Cat.* n. 3814.

WESTERN PENINSULA, from Khandeish and the Carnatic southward. CEYLON, *Trimen* (*introduced*).—DISTRIB. Affghan. and westward to Senegal.

Stems 1–3 ft., tufted, branching from the base, erect or geniculately ascending, leafy throughout. *Leaves* flat, 3–8 in., flaccid, finely acuminate, sparsely hairy; ligule short. *Racemes* 4–12 in., erect; rachis strict, stout, smooth. *Spikes* $\frac{1}{2}$–$2\frac{1}{2}$ in., opposite alternate or whorled, sessile, green or pale yellow, shining, at first erect, at last deflexed. *Spikelets* closely imbricate, about $\frac{1}{6}$ in. long; gl. I and II with straight terminal awns.—*Dinebra verticillata*, Wight ex Steud. Syn. Gram. 209, is *Myriostachys Wightiana.*

92. LEPTOCHLOA, *Beauv.*

Annual grasses. *Leaves* flat or involute. *Spikelets* very minute, compressed, 1–many-fld., sessile or shortly pedicelled, alternate and unilateral on the very slender spike-like branches of a lax panicle, not jointed at the base; rachilla produced between the flg. gls., jointed at the base. *Glumes* 3–many, membranous; I and II unequal, oblong or lanceolate, 1-nerved; III and following broadly ovate, subacute or obtuse, 3-nerved, nerves usually hairy, 2 lateral near the margin; palea nearly as long as the gl., 2-keeled. *Lodicules* 2, cuneate. *Anthers* 3, short. *Styles* free. *Grain* subglobose oblong obovoid or 3-gonous, closely invested by the gl. and palea.—Species about 12, tropical and subtropical.

I have had great difficulty in disposing of the synonymy of this genus, the species of which are in a chaotic condition, and I regard the result here attained as tentative only, some of the synonyms adopted being little better than guesses, though the results of much study. The genus is absent in the Wallichian Herbarium of the Linnæan Society.

* *Leaves short, broad, membranous.*

1. **L. uniflora,** *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 409; spikelets 1-fld., gl. I and II linear-lanceolate, III ovate acuminate. *Trim. Cat. Ceyl. Pl.* 109. L. gracilis, *Wight ex Steud. Syn. Gram.* 213. Cynodon gracilis, *Nees ex Steud. l. c.*; *Thw. Enum. Pl. Ceyl.* 371; *Wight Cat.* n.

1752. Poa chinensis, *Burm. Fl. Ind.* 27, t. xi. f. 3 (*non Linn.*). Agrostis montana, *Herb. Rottler.*—Leptochloa, *Wall. Cat.* n. 8895.

TINNEVELLY; at Palamcotta, *Rottler.* CEYLON, dry parts of the island.—DISTRIB.—Trop. Afric.

Stem 1–2 ft., very slender, geniculately ascending from a creeping base. *Leaves* 1–3 by $\frac{1}{2}$–$\frac{2}{3}$ in., elliptic-lanceolate, acute and apiculate, very thin, flaccid, base narrowed; ligule short, hyaline, lacerate. *Panicle* 6–8 in., very slender; spikes capillary, 2–3 in. *Spikelets* about $\frac{1}{16}$ in.; nerves of gl. III and palea fringed with long hairs. *Grain* not seen.—Judging from Burmann's figure of the leaf his *Poa chinensis* is, I think, *L. uniflora.*

** *Leaves long, narrow.*

2. **L. polystachya,** *Benth. Fl. Austral.* vii. 617 (*non Kunth*); panicle elongate contracted, spikes 1–1$\frac{1}{2}$ in. crowded erect, spikelets 1-fld. L. Neesii, *Benth. in Journ. Linn. Soc.* xix. (1881) 108; *Trim. Cat. Ceyl. Pl.* 109. Cynodon Neesii, *Thw. Enum. Ceyl. Pl.* 371. C. polystachyus, *Br. Prodr.* 187. C. virgatus, *Nees ex Wall. Cat.* n. 8894; *Wight Cat.* n. 1751; *Steud. Syn. Gram.* 213. Agrostis virgata, *Herb. Rottl. & Herb. Madr. ex Wall. l. c.*; A. chinensis, *Koen. ex Herb. Rottl.*

The Carnatic, *Rottler, Wight.* CEYLON; Trincomalee, *Glenie.*—DISTRIB. Australia.

Stems erect, 2–3 ft., stout or slender, sometimes proliferously branched below; lower nodes glabrous or bearded. *Leaves* 12–18 in., convolute, rarely flat, finely acuminate. *Panicle* 6–10 in., flexuous; branches filiform. *Spikelets* $\frac{1}{20}$ in., close-set, pale; gls. I and II unequal, ovate-lanceolate, rather longer than III, pale green; III broadly ovate, subacute, 3-nerved, nerves and keels of palea ciliate. *Grain* oblong, deeply grooved on one side.—The form of the panicle differs much from that of the following; but the spikelets and glumes are very much alike. *L. polystachya,* Kunth, an American plant, is a species of *Diplachne.*

3. **L. filiformis,** *Roem. & Sch. Syst.* ii. 580; spikes 2–3 in., spikelets 2–3-fld. *Kunth Enum. Pl.* i. 270, *Suppl.* 220; *Steud. Syn. Gram.* 209; *Wight Cat.* n. 1754; *Thw. Enum. Pl. Zeyl.* 271; *Trim. Cat. Ceyl. Pl.* 109; *Duthie Grass. N.W. Ind.* 192; *Aitchis. Cat. Panjab. Pl.* 167; *Miq. Fl. Ind. Bat.* iii. 389. E. chinensis, *Duthie Fodd. Grass. N. Ind.* 59, t. 71. ? E. filiformis, *Pers. Syn.* i. 87. Aira filiformis, *Roxb. Fl. Ind.* i. 326; *Herb. Ham. ex Wall. Cat.* n. 3804. Poa malabarica, *Klein ex Steud. Nom. Ed.* ii. 303, 60. P. chinensis, *Herb. Rottler.* P. contracta & panicea, *Retz. Obs.* iii. 11. P. virgata, *Roth. Nov. Sp.* 66; *Wight l. c.* Festuca tenuis & F. ? Basnia, *Herb. Ham. ex Wall. Cat.* n. 3805 C. D.—Leptochloa, *Wall. Cat.* 3804, 3805.

Throughout INDIA and BURMA in the low country. CEYLON; Colombo, *Ferguson.*—DISTRIB. Trop. Asia, Africa and America.

Stem 1–2 ft., slender, geniculately ascending. *Leaves* 4–10 in., flat, flaccid, finely acuminate; ligule short. *Panicle* 4–8 in., contracted or diffuse, branches very many almost capillary; spikelets $\frac{1}{20}$ in., gl. I and II oblong-lanceolate, acute; III and IV broadly ovate, nerves and palea ciliate. *Grain* oblong, closely invested with the gl. and palea.—I have followed my predecessors in referring this Indian grass to *Leptochloa filiformis,* R. & S., though that plant is described as American, and as having glabrous flowers; a character apparently confirmed by Jacquin's drawing of its synonym *Eleusine filiformis,* Pers. (Jacq. Eclog. Gram. t. iv.) and by an observation of Doell in Mart. Fl. Bras. ii. III. 93. On the other hand, I find the nerves of gl. III to be invariably hairy in American specimens corresponding with Jacquin's plate and the description of *L. filiformis,* and hence must suspect that this very inconspicuous character (except under a good magnifying power) has been overlooked.

Amongst other grasses referred to *filiformis*, but which from want of materials or descriptions or both I refrain from citing, is *L. tenerrima*, R. & S., which is described as having a 2-lobed tip of gl. III, a character which is approached only in *L. obtusiflora*, but which is easily produced in the very concave glume by a slight force in analyzing that organ. Bentham Fl. Hongk. and Fl. Austral. refers it to *L. chinensis*, to which its few (2–3-) fld. spikelets is opposed. It is probably a weak state of *L. filiformis*. With regard to *Aira filiformis*, Koen., in Roxb. Fl. Ind., Mr. Rendle informs me that there are in the British Museum a specimen so named by Koenig himself, and another authenticated by Roxburgh, and that both are the Indian *L. filiformis*. Roxburgh's characters of "leaves ensiform" and "calyx large" are therefore erroneous.

4. **L. chinensis,** *Nees in Syll. Ratisb.* i. (1824) 4, *Agrost. Bras.* 432; stem tall stout, spikes 2–4 in.; spikelets 4–6-fld., gl. iii. obtuse and apiculate. *Miq. Fl. Ind. Bat.* iii. 389 (*excl. Syn. Burm.*). *Steud. Syn. Gram.* 209; *Benth. Fl. Hongk.* 430, *Fl. Austral.* vii. 617; *Thw. Enum. Pl. Zeyl.* 371; *Trim. Cat. Ceyl. Pl.* 109; *Wall. Cat.* n. 8896; *Wight Cat.* n. 1755; *Duthie Grass. N.W. Ind.* 35 (*excl. syn.*), *Fodd. Grass. N. Ind.* 59, t. 71; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 372 (*excl. Syn.* tenerrima). E. decipiens & imbecilla, *Steud. l. c.* 279. Cynodon virgatus, *Nees in Wight Cat.* n. 1751. Poa as henes, *Roem. & Sch. Syst.* ii. 574. P. decipiens, *Br. Prodr.* 181. P. chinensis, *Linn. Sp. Pl.* 69 (*excl. Syn. Burm.*); *Roxb. Fl. Ind.* i. 332. P. malabarica, *Retz. Obs.* v. 19. P. secundaria, *Heyne in Herb. Rottl.*

Throughout INDIA and BURMA, in moist places. CEYLON, Atakalam Corle, *Thwaites.*—DISTRIB. China, Japan, Malaya, Australia.

Stem erect, or geniculately ascending, 2–4 ft., often as thick as a goose-quill. *Leaves* 6–18 in., flat or convolute, scaberulous; sheaths loose; ligule short, lacerate. *Panicle* 6–18 in.; branches opposite or alternate, suberect or spreading. *Spikelets* about $\frac{1}{10}$ in.; nerves of gl. III and keels of palea pilose. *Grain* loose, obtusely trigonous, subrugose.—A much more robust species than *L. filiformis*, but some of its forms are quite as slender as is that plant.

5. **L. obtusiflora,** *Hochst. in Flora*, xxxviii. (1835) 203; stem stout tall, panicle branches few erect, spikelets $\frac{1}{8}$ in. 6-fld., gl. III oblong-ovate tip truncately rounded or retuse erose, grain obovoid triquetrous. *Steud. Syn. Gram.* 209. Poa maysorensis, *Rottler mss.*

SOUTHERN INDIA; Cochin, at Ayacotta, *Rottler.* (June 10th, 1808).—DISTRIB. Afr. trop.

Stem 2 ft. and upwards, erect, branched, leafy. *Leaves* narrow. *Panicle* of 9–12 simple erect branches 2–3 in. long. *Spikelets* alternate, sessile, as in *L. chinensis*, but larger with fl. glumes $\frac{1}{12}$ in. long, more oblong, with broad more or less truncate toothed tips, sometimes emarginate or retuse with an apiculus; keels of palea quite smooth. *Grain* larger than in *chinensis*, triquetrous, ventrally depressed.—Rottler's specimen is imperfect; he has labelled it "*Poae* species *malabaricæ* proxima, *P. maysorensis*, nob," and added the above description of the stem leaves and panicle, which exactly accord with African ones. It is very near *L. chinensis*, but of the great many plants of that species which I have examined none have the large spikelets and glumes of this. The habitat is an old fortified town near Cochin, that had great trade with Africa, whence the plant was probably introduced with merchandise.

DOUBTFUL INDIAN SPECIES.

L. CYNOSUROIDES, *Roem. & Sch Syst.* ii. 579; *Kunth Enum. Pl.* i. 270; *Steud. Syn. Gram.* 208. L. filiformis, *Beauv. Agrost.* 71. Cynosurus filiformis, *Vahl Symb.* ii. 20. Chloris filiformis, *Poir. Encycl. Suppl.* ii. 238. Pollinia filiformis, *Spreng. Syst. Veg.* i. 288; spike solitary, spikelets 3-fld.—Probably not a *Leptochloa.*

93. **DICHÆTARIA,** *Steud.*

A tall slender perennial grass. *Leaves* long, narrow, flat. *Spikelets* 1-fld. with the very long filiform gl. of a 2nd, sessile or shortly pedicelled, distantly scattered along a very long filiform rachis, very narrow, terete, not jointed at the base; rachilla not produced beyond gl. III, jointed at the base. *Glumes* 4, I and II unequal, empty, separately deciduous, narrowly lanceolate, acuminate or dorsally rounded, subaristate, entire or minutely 2-toothed below the tip, 3-nerved; III linear, terete, coriaceous, 3-nerved, tapering into a very long rigid recurved awn with two erect setæ at its base; IV, a filiform, awn-like, recurved glume, minutely 2-aristate above the middle; palea very narrow, 2-cuspidate, keels scaberulous. *Lodicules* large, obliquely cuneiform, fleshy. *Anthers* 3, very slender. *Styles* distinct, stigmas slender. *Grain* narrow.

D. Wightii, *Nees ex Steud. Syn. Gram.* 145. Gymnopogon rigidus, *Thw. Enum. Pl. Zeyl.* 372, 444; *Trim. Cat. Ceyl. Pl.* 109. Aristida linearifolia, *Rottl. mss.—Herb. Wight* n. 1035.

SOUTHERN INDIA; Tranquebar, *Rottler*; probably Travancore, *Herb. Wight.* CEYLON, in dry parts of the island, *Thwaites.*

Stems, erect, 2–3 ft., tufted on a creeping woody rootstock. *Leaves* as long as the stem, ⅙–⅓ in. broad, quite glabrous, margins smooth; ligule of hairs. *Panicle* 12–18 in., rachis and few short branches filiform, quite smooth. *Spikelets* with the awns 1½ in. long, green; gl. I shorter than II, which is about ⅓ in. long and about ⅔ as long as III below the short lateral bristles; rachilla below III bearded. —I think Steudel was right in separating this grass from *Gymnopogon,* all the species of which are American, and from which it differs totally in habit, and in the form of the spikelets, gl. III of which greatly exceeds I and II.

Tribe IX. FESTUCACEÆ. (See p. 7.)

94. **POMMEREULLA,** *Linn. f.*

A short stout perennial creeping grass. *Leaves* short, strap-shaped. *Spikelets* 2–3-fld., distichously racemed, narrowly turbinate, villous, not jointed on their pedicels; rachilla stipitiform, narrowly obconic (resembling a callus), villous, jointed at the acute base, crowned by empty deformed fl. gls. *Glumes* 5–7, I and II narrow, persistent, empty; I lanceolate, 1-nerved; II longer, oblong-lanceolate, 3–5-nerved; III and IV embracing V and VI, empty, flabelliform, 4-lobed, dorsally shortly awned; V–VII flg. cuneate-obovate, 3-lobed; palea ovate, acute, nerves 2, pubescent. *Lodicules* 2, membranous. *Stamens* 2–3, anthers small. *Styles* distinct. *Grain* oblong, compressed, free.

P. Cornucopiæ, *Linn. fil. Diss. Nov. Gram.* 31, & *Suppl.* 105; *Vahl Enum. Pl.* ii. 393; *Beauv. Agrost.* 91, t. 18, f. 6; *Roxb. Pl. Corom.* ii. 17, t. 131, *Fl. Ind.* i. 331; *Roth. Nov. Sp.* 33; *Kunth in Ann. Sc. Nat. Ser.* I. xxiii. (1831) t. 7, *Enum. Pl.* i. 321; *Steud. Syn. Gram.* 249; *Trimen Cat. Ceyl. Pl.* 109; *Wall. Cat.* n. 8904; *Wight Cat.* n. 1769. P. elongatum, *Wight & Arn. in Wight Cat.* n. 1770. Pennisetum Cornucopiæ, *Heyne ex Wall. l. c.*

MYSORE and the CARNATIC, *Heyne, Wight.* CEYLON; Northern Province, *Trimen.*

Stem as thick as a crow-quill, rooting at the nodes; branches erect, stout, leafy, flattened. *Leaves* 1–3 in., distichous, flat, exactly linear, coriaceous, tip rounded, margins sparsely ciliate; sheath long or short, broad, flattened; ligule a ciliate ridge. *Raceme* $\frac{1}{2}$–2 in., usually half sunk in the uppermost sheath, rarely with an exserted naked peduncle and sometimes 2 erect branches. *Spikelets* $\frac{1}{10}$–$\frac{1}{6}$ in., shortly pedicelled, white, tomentose, awns shortly exserted; gls. I and II much shorter than the spikelet, keels nearly smooth, bases narrowed; II inserted much above I, its base tightly embracing the rachilla; III and IV narrowed into a tomentose stipes, embracing V and VI, 4-lobed with a short dorsal awn, disk coriaceous, margins and lobes hyaline; V–VII cuneately obovate, 3-lobed.—A very curious grass. The turbinate spikelets resemble clusters of those of *Gracilea*, but are not jointed at the base, and their structure is totally different. The above characters are drawn from many analyses, but they will no doubt be found to vary in a more extended suite of specimens.

95. **PAPPOPHORUM**, *Nees.*

Perennial grasses. *Leaves* narrow. *Spikelets* 1–3-fld., in contracted or spiciform panicles, not jointed at the base; rachilla jointed at the base. *Gl.* I and II membranous, keeled, 3– many-nerved, persistent; III and IV much shorter (except the awns), coriaceous, orbicular, concave, obscurely many-nerved, cleft into 9 or more equal or alternately longer long-ciliate erect awns; IV and V usually imperfect; palea small, broad, 2-keeled. *Lodicules* 2, dolabriform. *Stamens* 3. *Styles* short, distinct; stigmas plumose. *Grain* ovoid or oblong, free.—Species about 20, in warm regions.

The synonymy of the species of this genus is in a most unsatisfactory condition; I am doubtful of the nomenclature of some here described, and the Indian materials of others, not here alluded to, are insufficient for reliable determination or descriptions.

1. **P. elegans,** *Nees in Wight Cat.* n. 1771; gl. I 9-nerved, II 7-nerved, awns of fl. gl. nearly equal about thrice as long as their gl. *Wall. Cat.* n. 8902; *Steud. Syn. Gram.* 199; *Duthie Grass. N.W Ind.* 35. Ischæmum papposum, *Herb. Rottler.* Enneapogon dipsaceus, *Wall. mss.* Calotheca elegans, *Wight & Arn. ex Steud. l. c.*

PESHAWUR, *Stewart.* SCIND, *Stocks.* MYSORE and the CARNATIC, *Heyne, Wight,* &c. BURMA, *Wallich,* &c.

Stem 3–18 in., very slender, wiry, erect or ascending from a woody often thickened base; nodes glabrous or tomentose. *Leaves* very narrow, flat or convolute; ligule a ridge of hairs. *Panicle* 1–3 in., branches very short and rachis villous. *Spikelets* with the awns $\frac{1}{6}$–$\frac{1}{4}$ in., sessile and pedicelled, softly tomentose, nearly white; gl. I and II oblong-lanceolate, acuminate, I $\frac{1}{3}$ shorter than II; awns of III and IV ciliate below the middle; keels of palea pubescent.

2. **P. Aucheri,** *Jaub. & Spach Ill. Pl. Orient.* iv. 32, t. 323; gl. I and II 7-nerved, awns of flg. gls. three to four times as long as the gl. 4 much shorter than the others. *Steud. Syn. Gram.* 200; *Duthie Grass. N.W. Ind.* 35. P. turcomanicum, *Trautv. in Act. Hort. Petrop.* i. (1871) 27. P. persicum, *Steud. l. c.*; *Boiss Fl. Orient.* v. 558; ? *Edgew. in Journ. Linn. Soc.* vi. (1862) 196; *Aitchis. Cat. Panjab. Pl.* 106. Enneapogon persicum, *Boiss. Diagn.* i. V. 71.

WESTERN PANJAB and MOOLTAN, *Aitchison, Stewart, Edgeworth*, &c. WESTERN TIBET, alt. 3–7600 ft., *Clarke, Duthie*, &c.—DISTRIB. Affghan., Persia, Turkestan.

Stem 6–12 in., erect or ascending, slender, puberulous. *Leaves* 2–8 in., narrow, flat or convolute and filiform; sheaths smooth, or lower tomentose; ligule a pubescent ridge. *Panicle* 2–5 in., cylindric, silvery-yellow, with sometimes purple awns; rachis pubescent. *Spikelets* including the awns, ⅓–½ in. *Gls.* I and II narrowly lanceolate, finely pubescent; II rather the longest; III very short, villous, awns softly silky below the middle, the longer four times as long as the gl. and about ¼ longer than the intermediate; palea as in *P. elegans*.—I am doubtful about the identification of Edgeworth's Mooltan plant, of which the only specimens I have seen are very bad, consisting of tall very slender much branched rigid stems 12–18 in. high, with long very narrow rigid leaves, and a spiciform slender flowerless panicle 6 in. long, together with a spike of very immature spikelets. It is ticketed as from the Shah Kot Hills.

3. ? **P. brachystachyum,** *Jaub. & Spach Ill. Pl. Orient.* iv. 34; t. 324; dwarf, tomentose, spike very short, gl. I and II faintly 3–5-nerved below the middle, awns of fl. gl. about twice as long as their gl., 4 shortest. *Steud. Syn. Gram.* 200; *Boiss. Fl. Orient.* v. 558. ? P. arabicum, *Hochst. ex Steud. l. c.* 199; ? *Edgew. in Journ. Linn. Soc.* vi. (1862) 196; *Aitchis. Cat. Panjab Pl.* 166; *Duthie Grass. N.W. Ind.* 35. ? P. nanum, *Steud. l. c.*; *Edgew. l. c.*; *Aitchis. l. c.*; *Duthie l. c.* P. vincentianum, *Schmidt ex Duthie l. c.* (*in Syn.*)

The PANJAB; Multan, *Edgeworth*. RAJPOOTANA; at Jodhpur, *King*.—DISTRIB. Arabia, N. Africa.

I am very doubtful about this plant, King's specimens of which resemble a small state of *P. Aucheri*, with much shorter awns, the four shorter of which are not so short as in the figure cited of *P. brachystachyum*. Edgeworth's specimens of *P. arabicum* and *P. nanum* are insufficient for identification.

4. **P. robustum,** *Hook. f.*; stem stout, gls. I and II 3-nerved, awns of III nearly equal, about twice as long as their gls.

UPPER GANGETIC PLAIN; Hissar, *Drummond* (*Herb. Duthie*).

Stem 18 in.–3 ft., erect, or geniculately ascending, as thick as a crow-quill, pubescent; nodes tomentose. *Leaves* 6–10 by ⅛–¼ in., flat; lower sheaths pubescent; ligule a ridge of hairs. *Panicle* 2–5 in., silvery-grey, dense-fld., cylindric. *Spikelets* sessile, ⅙ in. with the awns, villous; gl. I ⅓ shorter than II, ovate-lanceolate; II lanceolate; III and palea as in *P. elegans*, but awns shorter, and as in that species with long cilia below the middle.

96. ARUNDO, *Linn.*

Tall stout perennial grasses. *Leaves* flat. *Spikelets* few-fld. in large decompound panicles, laterally compressed, fls. mostly bisexual; rachilla jointed at the base and between the flg. gls., glabrous or shortly hairy. *Glumes* 6 or more, I and II subequal, empty, narrow, acute or acuminate, glabrous, scarious, persistent, 3-nerved; flg. gls. lanceolate, acuminate, or 2-fid with a short awn, 3-nerved, dorsally hairy all over below the middle; palea hyaline, 2-nerved. *Lodicules* 2, obovate. *Stamens* 3. *Ovary* glabrous, styles distinct, stigmas plumose. *Grain* oblong.—Species 6 or 7, temp. and trop.

A. Donax, *Linn. Sp. Pl.* 81; stem creeping below, leaf-base amplexicaul, panicle erect thyrsiform, spikelets 3–4-fld., gls. I and II oblong-lanceolate 3-nerved, tip of flg. gls. minutely 2-toothed shortly awned.

Host Gram. Austr. iv. 22, t. 38; *Kunth Enum. Pl.* i. 246, *Suppl.* 159; *Reichb. Ic. Fl. Germ.* t. 109; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 36; *Ledeb. Fl. Ross.* iv. 394; *Boiss. Fl. Orient.* v. 564; *Aitchis. Cat. Panjab Pl.* 166; *Duthie Grass. N.W. Ind.* 35, *Fodd. Grass. N. Ind.* 60. A. bengalensis & bifaria, *Retz. Obs.* iv. 22, & v. 20; *Roxb. Fl. Ind.* i. 347, 348; *Kunth Enum. Pl.* i. 247. A. longifolia, *Salisb. Prodr.* 24. A. sativa, *Lamk. Fl. Fr.* iii. 616. A. triflora, *Roxb. Ic. Pict.* t. 853. Donax arundinaceus, *Beauv. Agrost.* 78, t. 16, f. 4. D. benghalensis, *Beauv. l. c.* 78. D. bifarius, *Trin. in Spreng. Neue Entdeck.* ii. 73. Amphidonax bengalensis, *Nees ex Steud. Syn. Gram.* 197; *Wight Cat.* n. 1748. A. bifaria, *Nees ex Steud. Syn. Gram.* 410; *Miq. Fl. Ind. Bat.* iv. 410. Scolochloa arundinacea, *Mert. & Koch Fl. Germ.* i. 529. Aira benghalensis, *Gmel. Syst.* i. 174.—Arundo, *Wall. Cat.* n. 5018, *excl. F.*, 5020.

LOWER HIMALAYA; from Kashmir to Nepal, ascending to 3500 ft.; and from the PANJAB to SILHET, the NAGA HILLS, alt. 5–8000 ft., and BURMA. The CIRCARS, NILGHIRI, and KURG HILLS.—DISTRIB. Westward to Europe, N. Africa, N. Asia.

Stem 6–10 ft., fistular. *Leaves* 1–2 ft., tapering from the base to the apex, smooth, bifarious, drooping; ligule a ridge of hairs. *Panicle* 1–2 ft., branches scaberulous, erect or drooping. *Spikelets* $\frac{1}{3}$ in., green or yellowish; gls. I and II acute or obtuse and apiculate.—A curious branched small-leaved apparently dwarf form named *A. bambusifolia, mss.*, was collected by Griffith on the summit of Thumathaya (Mishmi Mts.), and is alluded to in his Journals, p. 45, as "an Arundo festucoidea." Grisebach (in Goett. Nachr. (1868) 76) describes a form of *A. Pliniana*, Turra, with the mouth of the sheath ciliate, as a native of the Himalaya (Simla, alt. 3–9000 ft.). The above character is found in Indian specimens of what I cannot distinguish from *A. Donax*. *A. Pliniana* appears to Dr. Stapf and myself to be a mere form of *Donax* with smaller spikelets, which organs in Indian specimens vary from $\frac{1}{4}$–$\frac{1}{3}$ in. The plants with the smaller spikelets are, I presume, the *A. mauritanica*, Poir. (a synonym of *Pliniana*) of *Duthie Grass. N.W. Ind.* 35, *Fodd. Grass. N. Ind.* 60.

97. **PHRAGMITES**, *Trin.*

Tall perennial grasses. *Leaves* long. *Spikelets* 3–7-fld. in decompound panicles, not jointed on the pedicels, laterally subcompressed; rachilla jointed between the flg. gls. and above gl. III, silkily penicillate with very long hairs, not produced beyond the fl. gls. *Glumes* all glabrous, I and II unequal, oblong-lanceolate, 3-nerved, membranous, persistent; III much longer, narrowly oblong-lanceolate, acute, 3-nerved, male or neuter, persistent; flg. gls. subulate-lanceolate, subaristate, hyaline; palea much shorter. *Lodicules* 2, obtuse. *Stamens* 1–3. *Styles* 2, terminal, free, stigmas plumose. *Grain* oblong, terete.—Species few, temp. and trop.

1. **P. communis**, *Trin. Fund. Agrost.* 134; stem 6–10 ft., and leaves withering in winter, leaf-margins rough, panicle 6–18 in. subsecund, inclined, branches not widely spreading, gl. III $\frac{1}{2}$–$\frac{3}{4}$ in. *Kunth Revis. Gram.* i. 277, t. 50; *Enum. Pl.* i. 251, *Suppl.* 193; *Fl. Dan.* t. 2664; *Reichb. Ic. Fl. Germ.* t. 108; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 37; *Steud. Syn. Gram.* 195; *Franch. & Sav. Enum. Pl. Japon.* ii. 170; *Boiss. Fl. Orient.* v. 563; *Benth. Fl. Austral.* vii. 636; *Duthie Grass. N.W. Ind.* 35, *Fodd. Grass. N. Ind.* 60. P. chilensis, *Steud. Nom. Ed.* II. ii. 234. ? P. Emodi, *Arn. & Nees in Nov. Act. Nat. Cur.* xix., *Suppl.* i. (1843) 174. P. hispanica, *Nees l.c.* P. humilis, *Not. in Cat. Hort. Genuen.* (1846) 27. P. longivalvis, *Steud. l. c.* 196. P. mauritanica, *Kunth Revis.* i. 80, 277, t. 50, *Enum.* i. 251.

P. pumila, *Griseb. in Goett. Nachr.* (1868) 76 (*an Willk.* ?). P. vulgaris, *Trin. Fund. Agrost.* 134. Arundo graeca, *Link in Linnæa*, ix. (1834) 136. A. maxima, *Forsk. Fl. Æg. Arab.* 24. A. Phragmites, *Linn. Sp. Pl.* 81; *Host Gram. Austr.* iv. 23, t. 39; *Engl. Bot.* t. 401; *Knapp Gram. Britt.* t. 95; *Ledeb. Fl. Ross.* iv. 393; *Aitchis. Cat. Panjab Pl.* 266. ?A. tecta, *Blanc. Fl. Philipp.* 48. A. vulgaris, *Lamk. Fl. Franc.* iii. 615. Czernya arundinacea, *Presl Cyp. & Gram. Sicil.* 22.

KASHMIR LAKE, alt. 5–6000 ft., *Jacquemont*, &c. GARWHAL, alt. 4-5000 ft., *Duthie*. WESTERN TIBET, alt. 9–10,000 ft., *Thomson*, &c.—DISTRIB. N. and S. temp. regions.

Stem erect from a stout creeping rootstock, leafy up to the panicle, fistular. *Leaves* distichous, linear to broadly lanceolate, tip subulate, base rounded, not amplexicaul; ligule a ridge of short hairs. *Panicle* usually brownish purple; branches very slender, smooth, hairy; peduncle often silkily hairy at the very base of the panicle, sometimes densely. *Spikelets* $\frac{1}{2}$–$\frac{3}{4}$ in.; gls. spreading in frt. and exposing the long silky hairs of the rachilla, I and II longer than the flg.—Very variable; in dry situations in Tibet and Scind the stems are very short, straggling, with ovate-subulate concave rigid pungent leaves 1–2 in. long, and a reduced panicle. This starved state is the *Cenchrus frutescens*, Sieb. in Bot. Zeit. ix. (1822) 14. *P. pumila*, Griseb., is another reduced condition of *P. communis*, from Tibet, in which gl. III is as short as in *P. Karka*. Grisebach in Goett. Nachr. (1868) 76, has also var. *isiaca* (P. isiaca, *Reichb.*) as a native of Tibet. I have not seen his specimens, but neither Dr. Stapf nor I can find a valid character for this variety in European specimens.

2. **P. Karka,** *Trin. ex Steud. Nom. Ed.* ii. 324; stems very tall stout and leaves perennial, panicle $\frac{1}{2}$–2 ft. erect, branches widely spreading, gl. III rarely more than $\frac{1}{2}$ in. P. Roxburghii, *Steud. l. c.*; *Nees in Nov. Act. Nat. Cur.* xix., *Suppl.* i. (1843) 178; *Thwaites Enum. Pl. Zeyl.* 370; *Trim. Cat. Ceyl. Pl.* 109; *Benth. Fl. Hongk.* 428; *Duthie Grass. N.W. Ind.* i. 35, *Fodd. Grass. N. Ind.* 60; *Franch. & Sav. Enum. Pl. Jap.* ii. 170; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 378. P. bifaria, *Wight Herb.* n. 3310. P. nepalensis, *Nees ex Steud. Syn. Gram.* 196. Arundo Karka, *Retz. Obs.* iv. 21; *Roxb. Fl. Ind.* i. 348. A. Roxburghii, *Kunth Revis. Gram.* i. 79, *Enum. Pl.* i. 248; *Griff. Notul.* iii. 47, *Ic. Pl. Asiat.* t. 139, f. 243. A. Roxburghiana, *Kunth ex Steud. Nom. l. c.* A. tibialis, *Roxb. Ic. Pict.* (*ined.*), t. 854, *& in Wall. Cat.* n. 5017 G. A. Donax, *Herb. Ham. ex Wall. l. c.* B. A. Corea, *Herb. Rottl.* Oxyanthe japonica, *Steud. l. c.* 197. Sericura japonica, *Steud. in Flora*, xxix. (1846) 20. Trichoon Karka, *Roth. Catalect.* ii. 2.—Arundo, *Wall. Cat.* n. 5017, 5018 F., 5019.—Arundo, *Griff. l. c.* 48.

Throughout INDIA; from the Panjab to Burma, and southward to Ceylon, ascending the Himalaya in hot valleys to 3000 ft.—DISTRIB. Affghan., Japan, Trop. Asia, Africa, and Australia.

Except by its greater size, larger more spreading panicle with rather smaller spikelets, more spreading glumes, and shorter gl. III, I can point out no character whereby herbarium specimens of *P. Karka* can be distinguished from *P. communis*, and none of those are constant. In both dwarf or very slender states occur with almost filiform leaves and greatly reduced panicles. Dr. Stapf, who has carefully revised my separation of the great pile of Indian specimens into the two species, is equally at a loss to point out any other characters than those given above whereby to distinguish them, except that the rachilla appears to him to be rather longer and more slender in *P. Karka* and the glumes hence more widely apart; and the glumes also are rather narrower. The perennial duration of the stems and leaves of *P. Karka* requires verification. These organs are undoubtedly annual in the northern form of

P. communis, and F. Mueller observes (in a letter to Bentham) that they are so in the Tasmanian *P. communis*; whereas in the tropical Australian plant which Bentham includes under it they are evergreen.

Var. *cincta*; spikelets scaberulous, pedicels villous with silky hairs. *P. cincta*, *Clarke mss.*—Near Calcutta; Salt Lakes, *Kurz*; Mutlah, *Clarke*.—The specimens are in a very young state of flower. The glumes are identical with those of *P. Karka*, in which latter the pedicels of specimens from all parts of India are quite glabrous.

97*. **NEYRAUDIA,** *Hook, f.* (*Genus not in clavis*).

A tall perennial leafy grass. *Leaves* long, flat. *Spikelets* small, 4–8-fld., in an effuse decompound nodding panicle, laterally compressed, lowest flg. gl. sometimes glabrous epaleate and neuter; rachilla shortly bearded below the flg. gls., jointed at the base (above the neuter gl. if present) and between the flg. gls. *Glumes* all membranous; I and II unequal, empty, lanceolate, 1-nerved; flg. gls. elongate-subulate, more or less recurved, ending in a very slender tip with 2 setaceous points and a scabrid interposed awn, 3-nerved, lateral nerves submarginal, penicillate with long hairs; palea oblong, keels scaberulous. *Lodicules* 2, obovate or cuneate. *Stamens* 3, anthers long linear. *Ovary* shortly stipitate, oblong; styles terminal, stigmas feathery. *Grain* linear, terete, loose in the gl.

N. madagascariensis, *Hook. f.*; Arundo madagascariensis, *Kunth Revis. Gram.* i. 273, t. 48, *Enum.* i. 247, *Suppl.* 190; *Benth. Fl. Hongk.* 427; *Duthie Grass. N.W. Ind.* 35 (*excl. Syn.*), *Fodd. Grass. N. Ind.* 60. A. Reynaudiana, *Kunth Revis. l. c.* 275, t. 49, *Enum. l. c.*; *Steud. Syn. Gram.* 194; *Clarke in Journ. Linn. Soc.* xxv. (1889) 89. A. Zollingeri, *Buese in Miq. Pl. Jungh.* 243; *Miq. Fl. Ind. Bat.* iii. 411. Phragmites Zollingeri, *Steud. in Zoll. Cat.* 55; *Syn. Gram.* 196. Donax Thouarii, *Beauv. Agrost.* 78, t. 16, f. 5.—Arundinacea, *Griff. Notul.* iii. 49, n. 6; *Ic. Pl. Asiat.* t. 156, f. II.—Arundo, *Wall. Cat.* n. 5021, 5022.

The PANJAB and TROPICAL HIMALAYA, from Chamba to Sikkim, ascending to 5000 ft. SILHET and the KHASIA HILLS, ASSAM, PENANG and BURMA.—DISTRIB Tropical E. Asia and Malaya. Trop. Africa, Madagascar.

Stem 6–8 ft. (or more?) up to ½ in. diam., leafy to the panicle or near it, polished, solid, glaucous at the nodes. *Leaves* 1–2 ft., from filiform and convolute to 1 in. broad and flat, smooth, rather soft, margins smooth or nearly so, midrib and few nerves slender, base subamplexicaul; sheaths polished; ligule a villous ridge. *Panicle* 1–3 ft., rachis and filiform fascicled and whorled branches smooth or subscaberulous, ultimate branchlets capillary. *Spikelets* ¼–⅓ in. (including the awns), shortly pedicelled, pale brown, 4–8 fld.; gl. I and II shining, I ⅓ shorter than II; neuter gl. if present ⅛–⅕ in., about twice as long as I, strict, spreading, oblong-lanceolate, suberect, 3-nerved, sides convolute, quite glabrous; flg. gls. longer than the empty, more or less recurved, very slender, narrowed into the more or less recurved not twisted scaberulous awn with two bristles at its base; palea hyaline, 2-toothed, keels minutely ciliolate; callus, the upper portion of each internode of the rachilla, jointed with the latter, densely shortly bearded.—A much more elegant grass than any Indian species of *Arundo* or *Phragmites*, but like these extremely variable in habit and size, depending on place of growth. I can find no difference whatsoever between the specimens with and those without the empty gl. III; specimens with filiform leaves occur in both. Their habitats are as follows:—

1. *madagascariensis* proper; neuter gl. 0. Western Himalaya; from Kashmir to Kumaon, Rangoon, Prome.—Africa, Madagascar.

2. *Zollingeri*; neuter gl. present. Arundo Reynaudiana, *Kunth l. c.*—Sikkim Himalaya, Assam, Bengal, the Khasia Hills, Chittagong, Tenasserim, Penang.—Java.

98. **FINGERHUTHIA,** *Lehm.*

Erect, rigid, annual or perennial grasses, with the habit of *Phleum.* *Leaves* narrow. *Spikelets* crowded in a spiciform panicle, 1–3-fld., lowest in the panicle reduced to subulate glumes, laterally compressed, jointed on the very short pedicels; lower fl. bisexual or male, upper if present male, uppermost an empty gl. *Glumes* I and II subequal, rigidly membranous, keeled, 1-nerved, awned; III as long as II, oblong-lanceolate, obtuse, 5-nerved, mucronate or dorsally shortly awned; palea rigid, 2-keeled. *Lodicules* 2, obcordate. *Anthers* 3, linear-oblong. *Styles* long, free, stigmas plumose. *Grain* elliptic or oblong, free.—Species 2, a S. African, and the following.

A genus of doubtful affinity, with certain characters of *Alopecurus*, and of *Melica* in the spikelets jointed on their pedicels; the imperfect basal spikelets form a sort of involucre to the spiciform panicles as in *Sesleria*.

F. affghanica, *Boiss. Fl. Orient.* v. 569; spikelets 3-fld., lowest fl. fem., intermediate male, upper neuter, gls. I and II shortly awned keels and margins ciliate. F. Africana, *Aitchis. in Journ. Linn. Soc.* xix. (1882) 193 (*non Lehm.*).

WESTERN PANJAB; Peshawur, alt. 3500 ft., *Stewart.*—DISTRIB. Affghan.

Stem 12–18 in., tufted, slender, leafy. *Leaves* very narrow, flat, glaucous, glabrous, smooth; sheath glabrous, mouth bearded; ligule a ridge of soft hairs. *Spike* $\frac{3}{4}$–1 in., oblong, obtuse, long-peduncled, pale green. *Spikelets* $\frac{1}{5}$ in., closely imbricate; gls. I and II lanceolate, narrowed into straight awns as long as themselves, keels and margins ciliate with long hairs; III chartaceous, mucronate, keel smooth, margins ciliate; keels of palea ciliate; IV hardly awned; V an empty gl. *Grain* elliptic-oblong, acute at both ends.—The only Indian specimen is a very poor one.

99. **ELYTROPHORUS,** *Beauv.*

An annual erect grass. *Leaves* narrow, flat. *Spikelets* very minute, 3–5-fld., in globose sessile clusters that are densely packed along a simple rachis forming a long cylindric often lobed or interrupted spike; each cluster consists of very many densely crowded sessile compressed spikelets with awned glumes subtended by many empty glumes, not jointed at the base; rachilla smooth, jointed at the base and between the flg. gls. *Glumes* (of perfect spikelets), I and II subequal, empty, membranous, mucronate, keeled, 1-nerved, persistent; flg. gls. rather larger, narrowed into short awns, 3-nerved, uppermost empty; palea complicate, one or both keels winged. *Lodicules* 2, obliquely oblong. *Anthers* 1–3, minute. *Styles* free, stigmas long hairy. *Grain* obliquely oblong, beaked, free.

E. articulatus, *Beauv. Agrost.* 67, t. 14, f. 2; *Kunth Revis. Gram.* ii. 481, t. 154, *Enum. Pl.* i. 391, *Suppl.* 325; *Thw. Enum. Pl. Zeyl.* 374; *Trim. Cat. Ceyl. Pl.* 189; *Aitchis. Cat. Panjab Pl.* 171; *Wall. Cat.* n. 3825; *Duthie Grass. N.W. Ind.* 36, *Fodd. Grass. N. Ind.* 61, t. 72; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 379; *Miquel Fl. Ind. Bat.* iii. 400; *Benth. Fl. Austral.* vii. 638. Echinalysium articulatum & strictum, *Trin. Fund. Agrost.* 142. Dactylis spicata, *Willd. in Ges. Naturf. N. Schrift.* iii. (1801) 416. Sesleria spicata, *Spreng. Pugill.* ii. 21. Eleusine calycina, *Herb. Ham. ex Wall. l. c.*

From the SUTLEJ to BENGAL; ASSAM, the DECCAN PENINSULA, BURMA, and CEYLON.—DISTRIB. Trop. Asia, Africa, and Australia.

Whole plant 6–18 in. high, strict, glabrous; flowering part often longer than the rest. *Leaves* as long as the stem and spikes or shorter, very narrow; sheath loose; ligule obscure. *Spiciform panicle* 2–8 in. by $\frac{1}{6}$–$\frac{1}{3}$ in. diam., pale green or white, rarely branched below. *Spikelets* $\frac{1}{6}$ in., empty gls. ciliate, hyaline, nerve green; flg. gls. ovate, membranous, tips and awns scaberulous; palea hyaline, 2-fid.

100. LAMARKIA, *Moench.*

A small annual tufted grass. *Leaves* flat. *Spikelets* dimorphic, fertile and neuter, crowded on the drooping branches of a simple secund nodding panicle, terminal spikelet of each branchlet fertile of few gls. surrounded by empty gls., and by neuter spikelets of many obovate convolute erose gls. *Fertile spikelet*; glumes IV, I and II membranous, subequal, subulate-lanceolate, 1-nerved, subaristate, persistent; III shorter, ovate, convolute, dorsally awned below the 2-fid tip; IV terminating the slender rachilla, neuter, long-awned; palea of III narrow, 2-fid, 2-keeled. *Lodicules* very minute. *Stamens* 3, anthers linear. *Styles* distinct, stigmas slender, hairy. *Grain* elliptic-oblong, closely wrapped in the gls. and palea.

L. aurea, *Moench Meth.* 201; *Kunth Enum. Pl.* i. 389, *Suppl.* 324; *T. Nees Gen. Fl. Germ. Monoc.* i. n. 77; *Boiss. Fl. Orient.* v. 570; *Aitchis. Cat. Panjab Pl.* 170; *Duthie Grass. N.W. Ind.* 36, *Fodd. Grass. N. Ind.* 61. L. Hookeriana, *Griff. Notul.* iii. 94, *Ic. Pl. Asiat.* t. 143, f. 2. Chrysurus aureus, *Beauv. Agrost.* 123, t. 22, f. 5; *Reichb. Ic. Fl. Germ.* t. 58. C. cynosuroides, *Pers. Syn.* i. 80. Pterium elegans, *Desv. Journ. Bot.* i. (1813) 76. Tinæa elegans, *Garzia Rel. Acc. Zel. Aci.-Reale, Ann.* 3–4, 24, *ex Parlat. Fl. Palerm.* i. 138. Cynosurus aureus, *Linn. Sp. Pl.* 73; *Host Gram. Austr.* iii. t. 4; *Sibth. Fl. Graec.* i. t. 79.—Gramin. *Griff. Itin. Notes,* 349, n. 106.

WESTERN PANJAB; Peshawar, *Vicary, Stewart, Aitchison.*—DISTRIB. Westwd. to Spain and the Canaries.

Stem 4–8 in., stout or slender, leafy. *Leaves* broadly linear, acuminate; ligule oblong. *Panicle* 1-4 in., golden-yellow, shining; branches crowded, $\frac{1}{4}$–$\frac{1}{2}$ in. long, covered with fascicles of pendulous scaberulous spikelets. *Flowering spikelets* $\frac{1}{10}$–$\frac{1}{8}$ in.; awns variable in length, $\frac{1}{8}$–$\frac{1}{4}$ in.—A very beautiful grass.

101. CYNOSURUS, *Linn.*

Annual or perennial tufted grasses. *Leaves* flat. *Spikelets* dimorphic, fascicled, fascicles collected in a dense unilateral spiciform terminal panicle, the 1–2 terminal of each fascicle 2–3-fld., the lower 1–2 of many neuter distichous pectinately spreading subulate glumes, persistent on an unjointed rachilla. *Glumes* of fertile spikelet 4–5; I and II narrow, acute or subaristate, 1-nerved; III and IV awned or mucronate, 1–3-nerved, uppermost imperfect; palea narrow, 2-toothed, keels ciliate. *Lodicules* 2, acuminate. *Stamens* 3. *Styles* short, free. *Grain* elliptic or oblong, glabrous, adherent to the gl. and palea.—Species 3–4, in N. temp. regions.

C. cristatus, *Linn. Sp. Pl.* 72; perennial, fertile spikelets 3–5-fld. *Fl. Dan.* t. 238; *Host Gram. Austr.* ii. t. 96; *Kunth Enum. Pl.* i. 388, *Suppl.* 323; *Engl. Bot.* t. 316; *Knapp Gram. Britt.* t. 64; *Reichb. Ic. Fl. Germ.* t. 7; *T. Nees Fl. Germ. Monocot.* i. n. 96; *Beauv. Agrost.* 66; *Steud Syn. Gram.* 299; *Ledeb. Fl. Ross.* iv. 348; *Boiss. Fl. Orient.* v. 570; *Duthie Grass. N.W. Ind.* 36.

WESTERN HIMALAYA; Drankar, in Piti, alt. 12–14,000 ft., *Stolizka* (introd.?) —DISTRIB. Europe, As. Min. (introd. elsewhere).

Perennial. *Stem* 1–2 ft., slender, simple, wiry, strict, stoloniferous, naked above. *Leaves* very narrow, slightly hairy; ligule 2-fid. *Panicle* 1–3 in., semicylindric, strict, rigid, oblong or linear; rachis flexuous. *Spikelets* about $\frac{1}{12}$ in., the outer pectinately arranged, forming an involucre to each fascicle; flg. glumes I and II oblong, scabrid above, very shortly awned; neuter gls. rigid, cuspidate, concave, scabrid, pungent.—I have seen no Indian specimen of this common European grass. According to Boissier its Eastern limit is the Caucasus.

102. **KOELERIA,** *Pers.*

Annual or perennial tufted grasses. *Leaves* narrow. *Spikelets* 2–7-fld. (uppermost flg. sterile), densely crowded in subspiciform panicles, strongly laterally compressed, very shortly pedicelled; rachilla jointed between the fl. gls., and produced beyond the upper. *Glumes* I and II unequal, empty, persistent, keeled, acute or acuminate; fl. gls. broadly scarious, 3–5-nerved, mucronate acuminate or bifid and shortly awned in the sinus; awn straight scabrid; palea hyaline, 2-toothed. *Lodicules* 2. *Stamens* 3. *Stigmas* subsessile, plumose. *Grain* oblong, laterally compressed, free.—Species about 12, of N. temp. regions.

Sect. I. AIROCHLOA, *Link.* (Gen.). Perennial. *Flg. glumes* entire, not awned.

1. **K. cristata,** *Pers. Syn.* i. 97; leaves short, panicle shining, spikelets 2–4-fld. I 1-nerved, II longest, 1–3 nerved; flg. gls. acute or mucronate. *Fl. Dan.* t. 2223; *Kunth Enum. Pl.* i. 381, *Suppl.* 315; *Reichb. Ic. Fl. Germ.* t. 93; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 64; *Steud. Syn. Gram.* 292; *Duthie Grass. N.W. Ind.* 36, *Fodd. Grass. N. Ind.* 61; *Aitchis. Cat. Panjab Pl.* 170; *Ledeb. Fl. Ross.* iv. 402; *Boiss. Fl. Orient.* v. 571; *Benth. Fl. Austral.* vii. 639. K. glauca, *DC. Cat. Hort. Monsp.* p. 117; *Ledeb. l. c.* K. gracilis, *Pers. l. c.* K. Linkii, *Kunth l. c.* K. lobata, *Roem. & Sch. Syst.* ii. 620. K. nitida, *Nutt. Gen. Am.* i. 74. K. valesiaca, *Gaud. in Alpina* iii. 47, *Agrost.* i. 149. Aira cristata, *Linn. Sp. Pl.* 63; *Engl. Bot.* t. 648; *Knapp Gram. Britt.* t. 30. A. glauca, *Spreng. Nachtr. Bot. Gart. Halle,* i. 10; *Fl. Dan.* t. 1566; *Kunth l. c.* i. 381. Airochloa cristata, valesiaca, pubescens, & gracilis, *Link Enum. Hort. Berol.* i. 127, 128, ii. 228. Dactylis cristata & lobata, *Bieb. Fl. Taur. Cauc.* i. 67. D. paleacea, *Linn. Herb. ex Munro in Journ. Linn. Soc.* vi. (1862) 44. Poa cristata, *Withering Arr. Brit. Pl.* 145; *Host Gram. Austr.* ii. 54, t. 75. P. nitida & pyramidata, *Lamk. Illustr.* i. 182, 183. Festuca cristata, *Vill. Hist. Pl. Dauph.* ii. 93. F. dactyloides, & F. glaucescens, *Roth. Nov. Sp.* 78.

TEMPERATE and ALPINE HIMALAYA, and WESTERN TIBET; from Kashmir to Nepal, alt. 5–13,000 ft.—DISTRIB. N. temp regions.

Densely tufted, stoloniferous. *Stem* 1–3 ft., slender, glabrous or pubescent. *Leaves* narrow, flat or involute, glabrous or the lower ciliate; old sheaths not lacerate; ligule obscure. *Panicle* 1–4 in., linear-oblong or lanceolate; branches very short, scabrid; peduncle glabrous or tomentose. *Spikelets* $\frac{1}{8}$–$\frac{1}{5}$ in., shining, green, purplish, or silvery with a green keel; gls. I and II acute, broadly hyaline, glabrous pubescent or scabrid, keel subscaberulous, rachilla scabrid; flg. gls. lanceolate, acute or submucronate.—The synonymy given above includes but a few of the names given to this variable grass, the determination of the species of which would involve great labour. In India there are two prevalent forms, both common European ones, which following Boissier may be thus defined.

Var. *tenuifolia*, Boiss. Fl. Orient. v. 575; stems 6–10 in., leaves very short narrow convolute, panicle 1–3 in., spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. green or purplish. K. brevis, *Stev. in Bull. Soc. Nat. Mosc.* xxx. (1857) II 110.—Koeleria, *Wall. Cat.* n. 3792.—Subalpine and alpine situations, alt. 9–13,000 ft.

Var. *grandiflora*, Boiss. l. c.; leaves longer broader flat, panicles 3–5 in. white often interrupted or branched below, spikelets $\frac{1}{5}$ in. K. glauca, *Ledeb. Fl. Ross.* iv. 402. K. grandiflora, *Bertol. ex Schult. Mant.* ii. 345.—Temp. regions, alt. 5500–11,000 ft.

Sect. II. LOPHOCOLEA, *Reichb.* (Gen.). Annual. *Flg. glumes* 2-fid, awned.

2. **K. phleoides,** *Pers. Syn.* i. 97; leaves soft flat glabrous or hairy on the margins and towards the base, panicle cylindric pale or dull green lobulate or not, spikelets 3–7-fld., gl. I and II unequal acute or aristately acuminate glabrous pubescent or hirsute, flg. gls. 2-fid awned in the sinus, awn $\frac{1}{4}$–$\frac{1}{2}$ as long as the gl. rarely longer. *Kunth Enum. Pl.* i. 383, *Suppl.* 317, t. 28, f. 1; *Steud. Syn. Gram.* 294; *Ledeb. Fl. Ross.* iv. 403; *Boiss. Fl. Orient.* v. 572; *Duthie Grass. N.W. Ind.* 36, *Fodd. Grass. N. Ind.* 61; *Aitchis. Cat. Panjab. Pl.* 170; *Benth. Fl. Austral.* vii. 639. K. berythea, *Boiss. & Bl. Diagn. Ser.* II. iv. 135. K. brachystachya, *DC. Cat. Hort. Monsp.* 120. K. cristata, *Bertol. Amoen. Ital.* 67. K. dactyloides, *Spreng. Syst.* 332. K. Figarei, *de Notar. in Ann. Sc. Nat. Ser.* III. ix. (1848) 325. K. obtusiflora, *Boiss. l. c.* I. vii. 131. K. trapezuntina, *C. Koch in Linnæa,* xxi. (1848) 396. Festuca cristata, *Linn. Sp. Pl.* 76. F. phleoides, *Vill. Fl. Delph.* 7, *Hist. Pl. Delph.* ii. 95, t. 2; *Host Gram. Austr.* iii. t. 21. Lophochloa phleoides, *Reichb. Fl. Germ. Excurs.* 42, *Ic. Fl. Germ.* 73; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 63. Wilhelmsia caucasica, *C. Koch in Linnæa,* xxi. (1848) 400. Dactylis caudata, & cylindracea, *Brot. Fl. Lusit.* i. 99, 100. D. pungens, *Hornem. Enum. Hort. Hafn. ex Kunth* (1804) 9. D. spicata, *Brot. ex Spreng. Syst.* i. 332. Trisetum phleoides, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 65. Poa phleoides, *Lamk. Illustr.* i. 182. Bromus alopecuroides, *Lagasc. Gen. & Sp. Nov.* 4. B. dactyloides, *Roth Nov. Sp.* 60. Rostraria pubescens, *Trin. Fund. Agrost.* 149.

PLAINS of the PANJAB, from Lahore westwards. The SALT RANGE, &c. KASHMIR, *Clarke.*—DISTRIB. Westwd. to the Atlantic. (Australia, introd.)

Stems 6–12 in., erect or ascending. *Leaves* as long or shorter, erect, acuminate; sheaths smooth; ligule short, truncate. *Panicle* $\frac{1}{2}$–3 in., by $\frac{1}{4}$–$\frac{1}{3}$ in. diam., sometimes lobed or branched at the base. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in., hardy shining, gls. I and II unequal, shorter than the flg., keels scabrid or smooth; I oblong-lanceolate, 1-nerved; II longer, oblong, acuminate, 3-nerved; flg. gls. elliptic-oblong, 5-nerved, at length tubercled, awn short or long, rachilla hairy.—A variable plant in the glumes, of which Boissier has 4 varieties. As with *K. cristata*, I have confined the synonyms of *K. phleoides* to those I am pretty sure of. Probably a dozen others might be cited.

3. **K. argentea,** *Griseb. in Goett. Nachr.* (1868) 77; leaves flat glabrous, panicle interrupted elongate, spikelets 2–3-fld. silvery white

glabrous shining, tip of gl. I 2-toothed, awn of flg. gl. very short dorsal above the middle of the gl.

WESTERN TIBET, and Kishtwar, alt. 10–13,000 ft., *Falconer, Thomson,* &c.

Stem 12–18 in., tufted, tomentose below the panicle. *Leaves* 3–5 in., very narrow, glabrous, flat or convolute; ligule short, lacerate. *Panicle* 1½–3½ in., rachis tomentose. *Spikelets* ⅙ in., shining, gls. I and II subequal or I rather the shortest, both 1-nerved; rachilla laxly villous; awn of flg. gls. a little exceeding the gl. itself.

103. **CATABROSA,** *Beauv.* (by O. Stapf).

Perennial soft grasses; stem erect or creeping below; innovations extra-vaginal. *Leaves* flat. *Spikelets* very small, 2- (rarely 3–4)- fld., loosely panicled, oblong or obconic, awnless, subarticulate on their pedicels; rachilla jointed at the base, produced beyond the flg. gl. *Glumes* 4 or more, uppermost usually imperfect; I and II very unequal, hyaline, empty, persistent, 0–3-nerved; I obtuse or truncate; II broadly obcuneate or orbicular; III and IV longer than II, broadly cuneate or flabelliform, 3–5-nerved, truncate, crenate; palea as long as the gl., very broad, keels smooth, glabrous or hairy. *Lodicules* 2, minute, fleshy. *Stamens* 3. *Stigmas* subsessile, feathery. *Grain* obovate or oblong, free, glabrous.—Species 10–12, natives of cold or temperate regions.

Under *Phippsia* (p. 240), I indicated the affinity of that genus with *Colpodium*, and a further examination of the Indian plants referred to the latter, suggested to me the possibility of these, together with *Dupontia*, forming one genus. I accordingly drew Dr. Stapf's attention to the group, and requested him to give me his opinion. This he has done, confirming my hypothesis and drawing up a systematic account of the Indian species to be included under *Catabrosa*. As to *Phippsia algida*, the solitary arctic type of that genus, it differs from the other plants of the *Colpodium* group in the empty gls. being minute or obsolete, and may hence be considered as forming a section by itself, whilst *P. himalaica*, with larger empty gls., enters that of *Colpodium*. The position of *Catabrosa* is after *Poa*, replacing 119. *Colpodium* in the Key to the Genera.

§ 1. CATABROSA proper. Empty gls. almost nerveless; flg. gls. strongly 3-nerved, rarely with 2 intermediate fainter nerves.—Aquatic or subaquatic plants, rooting at the lower nodes, and with usually long creeping or ascending branched stolons.

1. **C. aquatica,** *Beauv. Agrost.* 97, t. 19, f. 8; stem compressed, leaves linear obtuse, panicle oblong or pyramidal, lower branches at length deflexed, spikelets 2 rarely 3-fld., gl. III erose, nerves subpercurrent. *Kunth Enum. Pl.* i. 369, *Suppl.* 306, t. 25, f. 1; *Ledeb. Fl. Ross.* iv. 387; *T. Nees Gen. Fl. Germ. Monoc.* i. n. 58; *Boiss. Fl. Orient.* v. 576. ? C. frigida, *Phil. Fl. Atac.* 55. C. ochroleuca, *Guss. Fl. Sic. Syn.* i. 100; *Dumort. Obs. Gram. Belg.* 108. Aira aquatica, *Linn. Sp. Pl.* 64; *Fl. Dan.* t. 381; *Host Gram. Austr.* ii. t. 41; *Engl. Bot.* t. 1557; *Knapp. Gram. Britt.* t. 29. Colpodium aquaticum, *Trin. Fund. Agrost.* 136. Glyceria airoides, *Reichb. in Moessl. Handb. Ed.* II. iii. 1827, *Ic. Fl. Germ.* t. 78. G. aquatica, *J. & C. Presl. Fl. Cech.* 25 (*non Wahlb.*); *Steud. Syn. Gram.* 286. Molinia aquatica, *Wibel Prim. Fl. Werth.* 116. Poa airoides, *Koel Descr. Gram.* 194.

BRITISH BELUCHISTAN; Quetta (*Duthie*).—DISTRIB. N. Temp. and Arctic regions.

Stem 6–24 in., erect from the creeping sometimes floating base, sheathed nearly up to the panicle; stolons creeping or ascending, branches long or short. *Leaves* 1–6 by $\frac{1}{8}$–$\frac{1}{3}$ in., linear, obtuse, flat, subflaccid, smooth; sheaths tight, smooth, of young branches closed to near the mouth but easily split to the base; ligule ovate or truncate, hyaline. *Panicle* up to 8 in., open, loose, rachis smooth, lower branches 5–10-nate, slender, very unequal, subscaberulous, the longer 4 in., branching; lateral pedicels very short. *Spikelets* pale green or yellowish, rarely purple; rachilla smooth; gls. very thin broad and obtuse; I about $\frac{1}{3}$ in., nerveless or 1-nerved; II $\frac{1}{6}$ in., 1– sub-3-nerved; fl. gls. nearly $\frac{1}{10}$ in., obovate to broadly oblong, truncate, shortly hairy below; palea broad, very obtuse, keels hairy below. *Lodicules* obliquely ovate. *Anthers* $\frac{1}{20}$ in. *Grain* $\frac{1}{20}$ in., oblong, subacute at both ends or top rounded, laterally subcompressed, hilum punctiform.—I have seen no Indian specimens, but am informed by Mr. Duthie that his was named by Hackel.

Var. *augusta*, Stapf; dwarf, tufted, with or without stolons, panicle narrow contracted, branches very short, gls. I and II nerveless or nearly so, flg. gls. $\frac{1}{15}$–$\frac{1}{14}$ in. C. aquatica, *Duthie Grass. N.W. Ind.* 36.—Western Tibet; Lanak Pass, alt. 15–16,000 ft., *Thomson.*

2. **C. sikkimensis,** *Stapf*; stem short, stolons long, leaves $\frac{1}{2}$–1 in., panicle 1$\frac{1}{2}$ in. narrow loose, branches 2-nate subsimple, spikelets $\frac{1}{10}$ in. 2-fld., gl. I minute, flg. gls. 5-nerved, nerves ending below the hyaline margin, lateral rather strong.

ALPINE SIKKIM; alt. 17,000 ft., *Gammie.*

Stem up to 6 in., prostrate or ascending; stolons with short fascicles of few short complicate leaves. *Spikelets* dark purple, variegated with yellow; gl. I up to $\frac{1}{50}$ in. nerveless, broadly ovate to oblong, II up to $\frac{1}{20}$ in., broader, sub-1-nerved; flg. gls. $\frac{1}{14}$ in., truncate, erose, glabrous; palea broad, very obtuse, keels smooth.—The specimens are very scanty, and have all the appearance of being reduced forms, growing on wet soil on the upper limits of vegetation. Specimens from a lower altitude may require modification of the above characters.

§ 2. COLPODIUM, *Trin.* (Gen.). Empty gls. 1–3-nerved; flg. gls. 5–3-nerved, nerves faint, lateral short, intermediate often suppressed or represented by a single spiral vessel.

* *Empty gls. about half as long as the flg.*

3. **C. himalaica,** *Stapf*; panicle erect spiciform dense-fld., spikelets $\frac{1}{10}$–$\frac{1}{6}$ in. 1–2-fld. Colpodium subspicatum, *Hack. mss.* Phippsia himalaica, *Hook. f. ante*, p. 240. Vilfa, sp. 2, *Herb. Strachey & Winterb.*

From Kashmir to Kumaon, alt. 13–14,500 ft.

Stems 3–8 in., tufted, erect, smooth, nodes 1–2. *Leaves* complicate or the cauline flat; sheaths tight, closed almost to the mouth; ligule very short. *Panicle* continuous or interrupted; rachis and branches smooth. *Spikelets* obovoid to oblong, rachilla glabrous; gls. very thin, nerves obscure; I very shortly 1-nerved; II with short obscure side-nerves; III with very short obscure side-nerves, keel and nerves shortly hairy; keels of palea ciliate. *Lodicules* connate at the base. *Grain* elliptic-oblong, compressed.—For further description see p. 240. Duthie's n. 12,160 has more acute empty glumes with sometimes erose margins, but does not otherwise differ.

4. **C. Thomsoni,** *Hook. f.*; panicle erect open lax-fld., spikelets $\frac{1}{8}$–$\frac{1}{6}$ in. 2–4-fld.

WESTERN TIBET; Nubra Valley, alt. 10–11,000 ft., *Thomson.*

Stems 4–6 in., tufted, very slender, erect, smooth, nodes 3–5. *Leaves* $\frac{1}{2}$–1$\frac{3}{4}$ in., linear, acute, flat, few-nerved; sheaths closed to $\frac{1}{10}$–$\frac{1}{5}$ in. of the mouth, thin, tight;

ligule broadly ovate, rounded. *Panicle* 1 in., ovate, erect; rachis smooth; branches spreading or deflexed, filiform, with few spikelets; lateral pedicels very short. *Spikelets* oblong, pale green; rachilla smooth, tip setiform; gls. thin, obtuse, I 1-nerved; II longer with 2 short lateral nerves; III 5-nerved, lateral nerves very faint and keel hairy; palea 2-fid, keels with long hairs. *Anthers* oblong. *Lodicules* connate near the base. *Grain* obliquely oblong, compressed.

5. **C. nutans,** *Stapf*; panicle open or contracted flaccid, spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. 2–5-fld. Colpodium nutans, *Griseb. in Goett. Nachr.* (1868) 76. Graphaphorum nutans, *Munro ex Duthie Grass. N.W. Ind.* 41.

ALPINE HIMALAYA; from Kashmir to Garwhal, alt. 10–14,000 ft., *Jacquemont*, &c.

Stems 12–18 in., tufted, erect, smooth, nodes 2–3. *Leaves* very variable in length and breadth, up to 6 in. by $\frac{1}{3}$ in., flat flaccid, many-nerved; sheaths of innovations closed nearly to the mouth; ligule $\frac{1}{4}$ in. *Panicle* 2–5 in., nodding or flexuous; rachis smooth; branches subcapillary, lowest 2–3-nate, sparingly divided beyond the middle; lateral pedicels half as long or as long as the spikelets. *Spikelets* broadly obovate, variegated, rachilla glabrous; gls. very broad, thin, obtuse and erose; I 1–3-nerved, II longer, $\frac{1}{10}$ in., with 2 short lateral nerves; III obovate, 3–5-nerved, lateral nerves very short, all hairy; keels of palea hairy. *Lodicules* lanceolate, connate near the base. *Anthers* linear. *Grain* oblong, subterete, with a shallow ventral groove.

** *Empty gls. as long as the flg. or longer.* Dupontia, *Br.* (Gen.).

6. **C. Wallichii,** *Hook. f.*; panicle subracemose few-fld., spikelets $\frac{1}{10}$–$\frac{1}{6}$ in. 1–2-fld.—Gramin., *Wall. Cat.* n. 8907.

NEPAL, *Wallich*. SIKKIM; Kankola Pass, alt. 14–15,000 ft., *J. D. H.*

Stem 6–18 in., from a shortly creeping base, slender or rather stout, smooth, nodes 1–2. *Leaves* 1–3 in., narrowly linear or filiform; ligule $\frac{1}{10}$ in. oblong, obtuse. *Panicle* 1–2 in., very narrow, usually reduced to a few-fld. raceme, erect; rachis smooth; branches with 1–3 spikelets, capillary, flexuous. *Spikelets* pendulous, green or purplish; rachilla with a setiform tip; gls. very thin, obtuse; I oblong 1–3-nerved; II broader, more obtuse, 3-nerves, side-nerves reaching about the middle; III broadly elliptic-oblong, 5-nerved, inner side-nerved very faint, glabrous or nearly so, outer and keel shortly hairy, keels of palea ciliate. *Lodicules* lanceolate, connate to the middle or below it. *Anthers* linear-oblong. *Grain* oblong, compressed.—The Sikkim specimens have somewhat smaller and paler spikelets than the Nepalese.

104. ERAGROSTIS, *Beauv.* (by O. Stapf.)

Annual or perennial grasses. *Stem* erect or geniculately ascending, very rarely prostrate. *Leaves* narrow. *Spikelets* many- (rarely 1–2-) fld., in open or contracted panicles, rarely in simple spikes, not articulate at the base (except *E. cynosuroides*), usually strongly laterally compressed; rachilla firm or subarticulate between the flg. glumes, not produced beyond the uppermost gl. *Glumes* many, broad, obtuse acute or mucronate, never awned, dorsally rounded and keeled; I and II much shorter than the spikelet, equal or unequal, empty, persistent or separately deciduous, 1-nerved or II 3-nerved; flg. glumes imbricating, at length deciduous from the rachilla, 3-nerved, all bisexual or the uppermost and rarely the lowest imperfect; palea broad, membranous, deciduous with its gl. or persistent on the rachilla, keels 2 ciliate scabrid or smooth. *Lodicules* 2, very minute. *Stamens* 2 or 3. *Ovary* glabrous; styles 2, stigmas plumose. *Grain* minute, globose oblong ovoid or obovoid, free in the gl. and palea.—Species about 100, of warm countries.

The Asiatic and African species of this very difficult genus have been studied by Dr. Stapf, to whom I owe the classification and diagnoses of the Indian. With regard to their synonymy, and the citation of authorities, we have together endeavoured to determine these; but from the want of authentically named specimens of the species described by Roxburgh (under *Poa*) and by older authors, and of those enumerated in more recent works, we cannot hope to have attained complete accuracy in these respects.—*J. D. H.*

A. Spikelets panicled; panicle open contracted or spiciform.—Species 1-23.

Sect. I. CATACLASTOS. *Rachilla* of spikelets more or less jointed, and breaking up from above downwards.—Species 1–7.

* *Panicle spiciform, rachis bearded at the nodes; margins of flg. glumes ciliate.*

1. **E. phleoides,** *Stapf*; perennial, panicle compact subclavate, spikelets $\frac{1}{8}$–$\frac{1}{4}$ by $\frac{1}{12}$–$\frac{1}{8}$ in. 12- or fewer fld., flg. gls. mucronate, keels of palea long-ciliate. Dactylis phleoides, *Klein ex Steud. Nom. Ed.* II. i. 478. D. phleoides & spicata, *Herb. Heyne ex Wall. Cat.* n. 5015.—Eragrostoides, *Wall. l. c.*

SOUTHERN INDIA, *Heyne.*

Stems 1–3 ft., densely tufted, erect or geniculately ascending, very slender. *Leaves* 3–5 in., linear-lanceolate, finely acuminate, spreading, flat, glabrous, base rounded; sheath bearded close below the mouth; ligule a few hairs. *Panicle* 1–3 in. by $\frac{1}{3}$–$\frac{2}{3}$ in. diam., pale, rather shining; branches very short, villous at the nodes. *Spikelets* moderately compressed; gls. I and II subequal, acute; flg. gls. $\frac{1}{10}$–$\frac{1}{8}$ in., membranous, minutely scaberulous; nerves slender, prominent; palea $\frac{1}{4}$ shorter than its gl. *Anthers* $\frac{1}{60}$ in. *Grain* $\frac{1}{100}$–$\frac{1}{50}$ in., elongate-ellipsoid.

2. **E. ciliata,** *Nees Agrost. Bras.* 512; perennial, panicle cylindric compact, spikelets $\frac{1}{10}$–$\frac{1}{6}$ in. or smaller much compressed 6–12-fld., flg. gls. cuspidately acuminate, keels of palea long-ciliate. *Wight Cat.* n. 1788; *Steud. Syn. Gram.* 265; *Dalz. & Gibs. Bomb. Fl.* 298. E. rupestris, *Steud. l. c.* Poa ciliata, *Roxb. Fl. Ind.* i. 334. P. cylindrica, *Herb. Heyne* & incurvata, *Rottl. ex Wall. Cat.* n. 5014. P. duplo-ciliaris, *Roxb. Ic. Pict. ined.* t. 831. P. rupestris, *Roth. Nov. Pl. Sp.* 71.—Eragrostid. *Wall. l. c.*

BOMBAY; at Domus, *Dalz. & Gibs.* CHOTA NAGPORE, *Clarke.* SOUTHERN INDIA, *Heyne.*—DISTRIB. Cochin China.

Stems 2–4 ft., erect or geniculately ascending from a nodose base clothed with hard sheaths, smooth. *Leaves* linear-lanceolate, finely acuminate, widely spreading, flat or convolute, rarely $\frac{1}{4}$ in. broad, smooth, glabrous; sheath bearded close below the mouth; ligule a few hairs. *Panicle* 2–3 by $\frac{1}{3}$ in. diam.; branchlets hirsute. *Gls.* I and II acute, ciliate; flg. gls. $\frac{1}{16}$–$\frac{1}{8}$ in., membranous or subhyaline, minutely scaberulous, nerves prominent; palea $\frac{1}{3}$ shorter than its gl. *Anthers* about $\frac{1}{16}$–$\frac{1}{15}$ in. *Grain* ovoid to ellipsoid, $\frac{1}{50}$ in., terete.—I have not seen Bombay specimens.

3. **E. coarctata,** *Stapf.*; perennial, panicle elongate subspiciform often lobed or lax-fld., spikelets $\frac{1}{12}$–$\frac{1}{6}$ by $\frac{1}{24}$ in., slightly compressed 5–10-fld., flg. gls. obtuse, keels of palea long-ciliate. E. cylindrica, *Aitch. Cat. Panjab Pl.* 169 (*non Steud.*).—Eragrostis, *Wall. Cat.* n. 5003 (*in part*).

From the UPPER GANGETIC PLAIN, Moradabad, *Thomson*, to SIKKIM, BEHAR, CHITTAGONG, ARRACAN and BURMA. CENTRAL PROVINCES & CHOTA NAGPORE, *Clarke*.

Stems in small or large tufts, 4–18 in. high, geniculately ascending from a nodose branched stock, base clothed with short hard sheaths. *Leaves* linear, spreading horizontally, more or less convolute, finely acuminate, glabrous, sometimes flat and $\frac{1}{4}$ in. broad, quite smooth, glaucous; sheath rather tight, smooth, bearded below the mouth; ligule very short. *Panicle* 2–6 in. by $\frac{1}{2}$-$\frac{2}{3}$ in. broad, sometimes very narrowly pyramidal, white, branches hispid; gls. I and II subequal; flg. gls. $\frac{1}{16}$ in., membranous, nerves prominent. *Anthers* $\frac{1}{50}$ in. *Grain* shortly ovoid, $\frac{1}{50}$ in. —Dwarf states 2–3 in. high occur; and tall ones 2–3 ft. high from the Sikkim Terai and Arracan, with leaves $\frac{1}{3}$ in. broad and a long lax narrow panicle 6 in. long.

** *Panicle open or more or less contracted or spiciform; margins of flg. gls. eciliate.*

4. **E. aspera,** *Nees Fl. Afr. Austr.* 408; annual, panicle large thyrsiform, at length expanding, branches and pedicels long, spikelets linear-oblong $\frac{1}{5}$ by $\frac{1}{24}$ in. erect 4–16-fld., empty gls. subequal, flg. gls. obtuse nerves prominent, keels of palea scaberulous, stamens 3. *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 386. E. tenella, *Nees in Wight Cat.* n. 1783 (*non Linn. nec Benth.*). E. paniculata, *Steud. Syn. Gram.* 278. Poa aspera, *Jacq. Hort. Vind.* iii. 32. P. paniculata, *Roxb. Fl. Ind.* i. 340.—Eragrostis, *Wall. Cat.* n. 3841.

SOUTHERN INDIA; Dindygul, *Wight*. BANGALORE, *Puckle* (*Ic. in Herb. Kew*), N. and S. CONCAN, *Lisboa*.—DISTRIB. Afr. trop. Isle of France.

Stem with the long panicle 2–4 ft., stout, suberect, branched, smooth. *Leaves* 8–18 in., flat, keeled, smooth; sheath villously bearded; ligule of long hairs. *Panicle* 10–20 in. by 4–6 broad, oblong to obovate-oblong, rachis scaberulous, bearded at the nodes with long white hairs; branches solitary or pseudo-whorled, capillary, divided from the base or nearly so, suberect; pedicels much longer than the small, rather scattered spikelets. *Flg. gls.* hardly $\frac{1}{16}$ in.; palea obscurely 3-lobed, lobes very obtuse, keels scabrid. *Anthers* $\frac{1}{50}$ in. *Grain* subglobose, about $\frac{1}{60}$ in.—Panicle quite unlike that of any other Indian species.

5. **E. ciliaris,** *Link Enum. Hort. Berol.* i. 192; annual, panicle spiciform rarely open, branches and pedicels very short glabrous, spikelets about $\frac{1}{10}$ in. long and broad 6–12-fld strongly compressed, empty gls. subequal acute, flg. gls. widely spreading mucronulate, lateral nerves submarginal, keels of palea very long-ciliate, stamens 3.

PLAINS of N. and S. INDIA (not in Ceylon).—DISTRIB. Reg. trop.

Stem 1–2 ft., procumbent below and geniculately ascending, slender. *Leaves* very narrow, flat; mouths of sheath with very long hairs. *Panicle* 3–6 in., interrupted or lobed below, appearing hairy from the long cilia of the palea, branches very short (except var. *Clarkei*) divided from the base, glabrous; nodes of glabrous rachis naked. *Spikelets* very pale, as broad as long, much compressed; flg. gls. subhyaline, scaberulous, often slightly recurved and elegantly distichous; rachilla of spikelet persistent. *Anthers* $\frac{1}{120}$ in. *Grain* elongate ovoid, about $\frac{1}{50}$ in.

Var. *ciliaris proper*, Stapf; panicle spiciform more or less lobed or interrupted. E. ciliaris, *Boiss. Fl. Orient.* v. 582; *Baker Fl. Maurit.* 456; *Duthie Grass. N.W. Ind.* 37, *Fodd. Grass. N. Ind.* 62; *Aitchis. Cat. Panjab. Pl.* 169; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 386; *Griseb. Fl. Brit. W. Ind.* 532. E. lobata, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 396. E. lepida, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 424. E. plumosa, *Boiss. Fl. Orient.* v. 582 (*excl. Syn.*); *Benth. Fl. Hongk.* 431. E. pulchella, *Parl. in Hook. Niger Flor.* 186. Megastachya ciliaris, *Beauv. Agrost.* 74.—Eragrostis, *Wall. Cat.* n. 5009, 5003 (*in part*).—N. India from the Panjab to Burma.—Westwd. to trop. Africa and America.

Var. *brachystachya*, Boiss. Fl. Orient. v. 582; panicle short compact cylindric. E. arabica, *Jaub. & Spach Ill. Pl. Orient.* iv. 31, t. 322. E. riparia, *Nees in Herb. Royle.*—Upper Gangetic Plain, Scind & the Concan.—Arabia, Afr. trop.

Var. *Clarkei*, Stapf; panicle open as in *E. tenella*.—Delhi, *Clarke*.

6. **E. tenella,** *Roem. & Sch. Syst.* ii. 576 (excl. β) (*non aliorum*); panicle variable, spikelets $\frac{1}{20}$–$\frac{1}{6}$ in. by $\frac{1}{24}$ in. broad or less, not strongly compressed 3–9-fld., empty gls. subequal or unequal, flg. gls. oblique not mucronate lateral nerves remote from the margins, keels of palea usually obscurely ciliate, stamens 3, grain ovoid.

Throughout INDIA, in the plains and lower hills, from the PANJAB to MALACCA and CEYLON. The NICOBAR ISLDS.—DISTRIB. Trop. Asia, Africa.

Very variable, from 6–18 in. high, stems usually slender, many from the root and densely tufted. *Leaves* narrow. *Panicle* 2–8 in. long, contracted or spreading, pale green or purplish, excessively branched, oblong ovate or cylindric, never with the long interrupted rachis and pseudo-verticillate branches of *E. interrupta*.

Var. *plumosa*, Stapf; panicle open often flexuous branches capillary nodes bearded, spikelets $\frac{1}{25}$–$\frac{1}{6}$ in. long- or short-pedicelled 3–9-fld., empty gls. unequal I $\frac{1}{3}$–$\frac{1}{5}$ shorter than II, rachilla subarticulate, flg. gls. $\frac{1}{30}$ in., anthers very minute, grain ovoid about $\frac{1}{60}$ in. E. despiciens, *Schult. Mant.* ii. 318. E. elegantula, *Nees* β., *Wight Cat.* n. 1781b. E. laxa, *Baker Fl. Maurit.* 456. E. plumosa, *Link Enum. Hort. Berol.* i. 192 (*non Boiss.*); *Wight Cat.* n. 1786; *Thw. Enum. Pl. Zeyl.* 373; *Trim. Cat. Ceyl. Pl.* 109; *Duthie Grass. N.W. Ind.* 38, *Fodd. Grass. N. Ind.* 64, t. 38, 77; *Aitchis. Cat. Panjab Pl.* 170; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 385. E. tenella, *Roem. & Sch. l. c.*; *Steud. Syn. Gram.* 266. Poa amabilis, *Linn. Sp. Pl.* 68. P. capillaris, *Roxb. Ic. Pict. ined.* t. 837. P. despiciens, *Link Enum. Hort. Berol.* i. 88. P. hirsuta, *Herb. Rottl.* P. plumosa, *Retz. Obs.* iv. 20; *Kunth Enum. Pl.* i. 338; *Roxb. Fl. Ind.* i. 337. P. tenella, *Linn. l. c.* 69. *Burm. Fl. Zeyl.* t. 47, f. 3); *Retz. Obs.* v. 19; *Kunth Rev. Gram.* ii. 467, t. 147, *Enum. Pl.* i. 338, *Suppl.* 294.—Eragrostis, *Wall. Cat.* n. 5007.—Throughout India, Burma & Ceylon (C.P. 926, 70).

Var. *riparia*, Stapf; panicle contracted very narrow flaccid, rachis glabrous, branches subfiliform or capillary, spikelets as in var. *plumosa*, empty gls. unequal I = $\frac{1}{3}$ shorter than II, flg. gls. $\frac{1}{25}$ in., anthers about $\frac{1}{100}$ in., grain $\frac{1}{60}$ in. ovoid. E. plumosa (*in part*) *Thw. Enum. Pl. Zeyl.* (CP. 927, 928). E. riparia, *Steud. Syn. Gram.* 265; *Nees in Wight Cat.* n. 1787; *Duthie Grass. N.W. Ind.* 38. E. ciliaris, β, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 397. E. plumosa, *var.* maritima, *Trim. Cat. Ceyl. Pl.* 109 (CP. 927). Poa incurva, *Herb. Rottl.* (*in part*). P. riparia, *Willd. in Ges. Naturf. Fr. Berl. N. Schrift.* iv. (1803) 185. P. setacea & laevis, *Herb. Rottl.* P. tenella, *Roxb. Fl. Ind.* i. 337; *Grah. Cat. Bomb. Pl.* 236.—Eragrost. *Wall. Cat.* n. 5011.—Lower Bengal, and southwd. Laccadive Islds. CEYLON (CP. 927, 928).

Var. *viscosa*, Stapf; stem and rachis of panicle below viscid, panicle stiff stouter with firmer more strongly nerved glumes than in vars. *plumosa & riparia*, oblong to linear open contracted or compact, branches filiform often very short, nodes glabrous or obscurely bearded, spikelets few–16-fld. often purplish, empty gls. subequal or I slightly shorter, fl. gls $\frac{1}{25}$–$\frac{1}{15}$ in., anthers about $\frac{1}{100}$ in., grain ovoid $\frac{1}{60}$–$\frac{1}{50}$ in.—Sub-var. *a*, *aperta*, Stapf; panicle oblong or pyramidal open, branches distinctly lengthened. E. viscosa, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 397; *Wight Cat.* n. 1785; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 386. Poa ciliaris, *Roxb. Ic. pict. ined.* t. 832, 856. *Herb. Madr. Wall. Cat.* n. 5008 A. P. glutinosa, *Herb. Roxb.* P. plumosa & malabarica, *Herb. Heyne ex Wall. Cat.* n. 5008 C. D. E. P. Telphulia, *Herb. Ham. ex Wall. Cat.* n. 5008 B. P. viscosa, *Retz. Obs.* iv. 20; *Roxb. Fl. Ind.* i. 336; *Grah. Cat. Bomb. Pl.* 236; *Kunth Enum. Pl.* i. 336.—Eragrost. *Wall. Cat.* n. 5008, 5010.—From the Gangetic Plains & Bombay southwd.—Trop. & S. Africa.—Subvar. β. *lasiantha*, Stapf; stem $2\frac{1}{2}$ ft. erect branched, nerves of fl. gls. ciliate. E. terebinthacea, *Kurz mss.*—Pegu, *Kurz.* Burma, *Collett.* —Subvar. γ. *contracta*, Stapf; panicle compact spiciform lobed or interrupted, branches very short. E. mangalorica, *Hochst. ex Steud. Syn. Gram.* 265. E. viscosa, β. minor, *Nees in Wight. Cat.* n. 2359. ? E. viscosa, *Dalz. & Gibs. Bomb. Fl.* 298. Poa incurva, *Herb. Rottl.* (*in part*).—Deccan Peninsula.

Var. *breviculmis*, Stapf; stems 1–3 in. usually ascending from a prostrate base, panicle $1–1\frac{1}{2}$ in. by 3–4 lines broad oblong to ovate-oblong rather dense but not compact, rachis bearded or not, empty gls. subequal, flg. gls. $\frac{1}{24}$ in., anthers $\frac{1}{150}–\frac{1}{120}$ in. or less, grain $\frac{1}{50}$ in.—From the Panjab to Behar and Central India.

7. **E. interrupta,** *Beauv. Agrost.* 71 (*non Roem. & Sch. nec Trin.*); panicle very variable usually stiff interrupted, spikelets $\frac{1}{12}–\frac{1}{4}$ in. ovate to linear few or many-fld., flg. gls. obtuse nerves slender, keels of palea scaberulous, stamens 2, grain obovoid.

Throughout INDIA, BURMA, CEYLON.—DISTRIB. Mesopot., Afr. trop.

Very variable, from 2–6 in. high with slender stems and ovate panicle to 3 ft. high and branched with the stem as thick as a small goose-quill, and a panicle 1–2 ft. long either contracted with appressed branches or interrupted with many tiers of rather short spreading subwhorled branches. *Spikelets* usually very minute, from $\frac{1}{20}$ in. with 2–3 flg. gls. to about $\frac{1}{4}$ in. with many flg. gls., green or pale brown, rarely coloured.

Var. *Koenigii*, Stapf; panicle long narrow with short dense pseudowhorls, spikelets shortly pedicelled usually 6–14-fld., flg. gls. $\frac{1}{32}–\frac{1}{28}$ in. or less. E. Koenigii, *Link Enum. Hort. Berol.* ii. 294; *Steud. Syn. Gram.* 266. E. hapalantha, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1839) 409 (*in part*). E. minutiflora, *Presl Rel. Hænk.* i. 274 (*excl. Syn.*); *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 386. E. mossulensis, *Steud. l. c.* 264. E. nutans, *Nees. in Wight Cat.* n. 1776; *Steud. Nom. Ed.* II. i. 563; *Duthie Grass. N.W. Ind.* 38, *Fodd. Grass. N. Ind.* 63, t. 76; *Aitchis. Cat. Panjab Pl.* 169; *Lisboa l. c.* 381; *Boiss. Fl. Orient.* v. 583. E. Rothii, *Steud. Syn. Gram.* 267. E. stricta, *Steud. l. c.* 264. E. verticillata, *Nees in Wight. Cat.* n. 1784. Poa Corána, & P. diandra, *Herb. Ham. ex Wall. Cat.* n. 3850 F. D. P. interrupta, *Lamk. Ill.* i. 185; *Poir. Encycl.* v. 87; *Heyne ex Roth. Nov. Sp.* 67; *Koen. ex Roxb. Fl. Ind.* i. 335. P. Koenigii, *Kunth Enum. Pl.* i. 346. P. latifolia, *Wall. Cat.* n. 5001 E. P. nutans, *Koen. ex Roth. Nov. Sp.* 64; *Roxb. Fl. Ind.* 335 (*non Retz.*).—Eragrostis, *Wall. Cat.* n. 3850 A. D. E.—I. 5005, 5006.—All India. Ceylon, *Trimen.* Eastwd. to Egypt. As. and Afr. trop.

Var. *diarrhena*, Stapf; panicle long linear-oblong, branches 1–2 in. hardly whorled simple at the base, spikelets 10–14-fld., flg. gls. $\frac{1}{24}$ in. E. diandra, *Aitchis. Cat. Panjab Pl.* 169 (*non Steud.*); *Duthie Grass. N.W. Ind.* 37; *Griseb. in Goett. Nachr.* (1868) 76. E. diarrhena, *Steud. Syn. Gram.* 266. Poa diandra, *Roxb. Fl. Ind.* i. 336 (*non Br.*). P. diarrhena, *Schult. Mant.* 616.—Eragrostis, *Wall. Cat.* n. 3850 K. L., 5002, 5004.—Sirmore, Bengal, Mysore, Carnatic.

Var. *diplachnoides*, Stapf; stem tall stout branched, panicle long effuse or contracted flaccid, branches solitary or 2–3 in a whorl elongate simple or if branched the whorl rarely overtopped by 1 or 2 branches 2–5 in. long, ultimate branches not divaricate, spikelets 6–12-fld., flg. gls. very obtuse rarely $\frac{1}{32}$ in. E. diplachnoides & Hochstetteri, *Steud. Syn. Gram.* 268. E. nutans, *Thw. Enum. Pl. Zeyl.* 373; *Trim. Cat. Ceyl. Pl.* 109. Diplachne elongata & poæformis, *Hochst. ex Steud. l. c.*—Central India, eastwd. to Afr. trop., *Clarke, Duthie.* Ceylon, *Walker, Thwaites* (CP. 933 (*in part*) 3259.

Var. *tenuissima*, Stapf; panicle long loose narrow usually stiff, branches $\frac{1}{2}–2$ in. pseudo-whorled spreading ramified from the base, branchlets and pedicels divaricate filiform to capillary, spikelets few-fld., fl. gls. very obtuse $\frac{1}{32}$ in. E. aurea, *Steud. Syn. Gram.* 267. E. caudata, *Nees ex Steud. l. c.* 264; *Duthie Grass. N.W. Ind.* 37. E. japonica, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 405. E. tenella β, *Roem. & Sch. Syst.* ii. 356. E. tenella, *Benth. Fl. Hongk.* 431; *Fl.*

Austral. viii. 643 (*non Beauv.*); *Duthie Fodd. Grass. N. Ind.* 65, t. 78. E. tenellula, *Steud. Syn. Gram.* 279. E. tenuissima, *Schrad. ex Nees Fl. Afr. Austr.* 409, 410. Poa japonica, *Thunb. Fl. Jap.* 31. P. hyemalis, Laka, & speciosa, *Herb. Ham. ex Wall. Cat.* n. 3850 C. B. P. tenella, *Br. Prodr.* 181 (*non Beauv.*); *Roxb. Fl. Ind.* i. 337, *Ic. Pict. ined.* t. 837. P. tenellula, *Kunth Enum. Pl.* i. 338.—Eragrostis; *Wall. Cat.* n. 3850 B. C. H. 5001 A—D.—Temp. & trop. Himal. from the Panjab eastwd. and southwd. to Ceylon; ascends the Himalaya to 7000 ft.—Trop. As.

Sect. II. PTEROESSA. *Rachilla* of spikelet tough, persistent; flg. glumes falling away from its base upwards.—Species 8–24.

* Spikelets always flat, usually elliptic-ovate to oblong; lateral nerves of flg. gls. very prominent, straight, almost percurrent; paleæ deciduous with their glumes.

8. **E. amabilis,** *Wight & Arn. ex Nees in Hook. & Arn. Bot. Beech. Voy.* 251 (*excl. Syn. Linn.*) annual, panicle oblong or ovoid-oblong open or contracted, branches solitary ramifying from near the base, spikelets $\frac{1}{6}$–$\frac{1}{2}$ in. ovate rarely oblong or linear-oblong up to 50-fld., empty gls. subequal acute 1-nerved, flg. gls. very close set distichously spreading broadly elliptic shortly acuminate, palea elliptic keels winged scabrid. *Wight Cat.* n. 1777; *Wall. Cat.* n. 3838; *Nees in Act. Acad. Nat. Cur.* xix. *Suppl.* i. (1843) 205. E. polymorpha, *Trin. ex Steud. Nom. Ed.* II. i. 364, 562. E. rubens, *Hochst. ex Miq. Analect. Bot.* ii. 26; *Steud. Syn. Gram.* 265. E. unioloides, *Nees ex Steud. l.c.* 264; *Thw. Enum. Pl. Zeyl.* 373; *Trim. Cat. Ceyl. Pl.* 109; *Duthie Grass. N.W. Ind.* 38, *Fodd. Grass. N. Ind.* 65; *Aitchis. Cat. Panjab Pl.* 170; *Lisbôa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 383; *Griseb. in Goett. Nachr.* (1868) 76. Poa amabilis, *Herb. Rottl.* (*non Linn.*). P. multiflora, *Roxb. Fl. Ind.* i. 338. P. polymorpha, *Br. Prodr.* 180. P. pseudamabilis, *Roxb. Ic. Pict. ined.* t. 843. P. rubens, *Lamk. Illustr.* i. 184, t. 45, f. 2; *Kunth Enum. Pl.* i. 335. P. unioloides, *Retz. Obs.* v. 19; *Roxb. Fl. Ind.* i. 330; *Kunth l.c.*; *Grah. Cat. Bomb. Pl.* 236. Briza rubra, *Lamk. Ill.* i. 187; *Kunth l.c.* 371. Uniola indica, *Spreng. Syst.* i. 349; *Dalz. & Gibs. Bomb. Fl.* 298. Megastachya polymorpha, *Beauv. Agrost.* 74.

PLAINS OF INDIA and LOWER HIMALAYA, from Kashmir (ascending to 6000 ft.), eastwd. to Burma and southwd. to CEYLON (CP. n. 930).—DISTRIB. As. trop.

Stem 6–18 in., rather slender. *Leaves* usually short, flat; mouth of sheaths naked. *Panicle* 2–4 in., branches filiform, not very numerous or long, rachis and nodes glabrous. *Spikelets* broad or narrow, pale or purplish; rachilla tough, internodes very short, $\frac{1}{100}$ in.; empty gls. $\frac{1}{25}$–$\frac{1}{20}$ in. 1-nerved; flg. gls. nearly $\frac{1}{12}$ in. long, mucronulate; palea $\frac{1}{5}$–$\frac{1}{6}$ shorter than its gl. *Stamens* 3, anthers $\frac{1}{100}$–$\frac{1}{50}$ in. *Grain* obovoid or ellipsoid, laterally compressed, about $\frac{1}{3}$ by $\frac{1}{5}$ in.

** Spikelets usually linear or linear-oblong, less compressed and with less prominent nerves than in *, or if strongly compressed and nerved then with persistent paleas.

† Spikelets more or less fascicled on the primary or secondary branches or shortly pedicelled in narrower racemes.

9. **E. malayana,** *Stapf*; annual, panicle ovoid, branches solitary at length spreading flowering to the base, pedicels as long as the spikelets or shorter, spikelets $\frac{1}{10}$–$\frac{1}{5}$ in. linear-oblong 10–30-fld., rachilla almost straight internodes very short, gls. all broad closely imbricate; sides

convex, empty gls. unequal broadly ovate acute, flg. gls. ovate shortly acuminate keel curved, keels of palea scaberulous.

PERAK, *Wray*. MALACCA, *Hervey*.—DISTRIB. Borneo, Banca.

Stems densely tufted, 10–18 in., erect or geniculately ascending, very slender. *Leaves* 2–3 in., very narrow, strict, finely acuminate, convolute; mouth of sheath with long hairs. *Panicle* 2–3 in., open or contracted, branches ramified from near the base, branchlets short contracted filiform, rachis glabrous. *Spikelets* slightly compressed, rachilla tough; gl. I $\frac{1}{28}$ in.; II $\frac{1}{24}$ in.; flg. gls. $\frac{1}{25}$ in., mucronulate, lateral nerves inconspicuous; palea obovate-oblong, rather shorter than its gl., keels narrow. *Grain* $\frac{1}{50}$ in., ovoid or ellipsoid, slightly laterally compressed.

10. **E. stenophylla,** *Hochst. ex Miquel Analect. Bot. Ind.* ii. 27; branches of panicle much ramified from above the base, pedicels short filiform, spikelets $\frac{1}{6}$–$\frac{1}{3}$ in. linear 30–40-fld., rachilla zigzag, empty gls. subequal subacute 1-nerved, flg. gls. ovate acute sides convex, keel curved, palea caducous with the gl. keels scabrid. *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 385. E. Brownei, *Nees in Wight Cat.* n. 1780 *partim* (*non Steud.*). E. elegantula, *Nees l. c.* 1781, *α*, *β* (*non Steud.*); *Duthie Grass. N.W. Ind.* 37, *Fodd. Grass. N. Ind.* 63, t. 74. E. gangetica, *Steud. Syn. Gram.* 266. E. ovina, *Nees ex Steud. l. c.* 268. ?E. Willdenovii, *Steud. Nom. Ed.* II. i. 565. P. amabilis & nutans, *Herb. Heyne ex Wall. Cat.* n. 3847 A. Poa amabilis, *Herb. Rottl.* (*non Linn.*). P. atroviridis, *Herb. Ham. ex Wall. Cat.* n. 3844 *partim* (*non Desf.*). P. gangetica, *Roxb. Fl. Ind.* i. 340. P. nutans, *Retz. Obs.* iv. 19 (*non Roxb.*); *Thwaites Enum. Pl. Zeyl.* 373. P. procera, *Hb. Wight ex Wall. Cat.* n. 3831 C. P. ovina, *A. Rich. Tent. Fl. Abyss.* ii. 428. P. viscosa, var. *Wall. l. c.* n. 3831.—Eragrostis, *Wall. Cat.* n. 3030 A, 3831 B. C. D., 3832 A. (*in part*) 3043 E., 3844, 3847.

Throughout INDIA and BURMA. CEYLON, *Thwaites* (CP. 925, 932).—DISTRIB. Trop. Asia and Africa.

Annual or subperennial. *Stems* many, densely tufted, 12–18 in. high, geniculately ascending. *Leaves* rather short, smooth, usually strict and convolute; sheaths smooth. *Panicle* ovate or oblong or sublinear, subflexuose, inclined; branches rather distant, alternate, obliquely spreading when ripe, ramifications short, contracted. *Spikelets* crowded, blue grey, rachilla tough; gl. I $\frac{1}{32}$ in.; II $\frac{1}{25}$ in. or shorter; flg. gls. $\frac{1}{15}$ to $\frac{1}{20}$ in. or more, lateral nerves slender; palea rather shorter than its gl., gently curved. *Stamens* 3, anthers minute about $\frac{1}{120}$–$\frac{1}{100}$ in. *Grain* about $\frac{1}{100}$ in., globosely oblong to subglobose.

11. **E. elegantula,** *Steud. Syn. Gram.* 266 (*non Nees*); perennial, panicle oblong, branches solitary short, pedicels very short, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. linear to linear-oblong 8–30-fld., rachilla tough, empty gls. subequal acute 1-nerved, flg. gls. ovate acute sides convex, palea caducous with the gls. keels scabrid. *Griseb. in Goett. Nachr.* (1868) 75; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 384. E. Brownei, *Nees ex Wight Cat.* n. 1780; *Aitchis. Cat. Panjab. Pl.* 169; *Duthie Grass. N.W. Ind.* 36, *Fodd Grass. N. Ind.* 62. E. luzoniensis, *Steud. l.c.* 266. Poa atroviridis, *Ham. ex Wall. Cat.* n. 3843 A. P. convoluta, *Heyne in Herb. Rottl.*; *Wall. Cat.* n. 3831 E. P. Chariis, *Schult. Mant.* i. 314. P. diandra & cernua, *Herb. Wight ex Wall. Cat.* n. 3843 B. C. P. distans & laevis, *Hb. Heyne ex Wall. l. c.* n. 3840. P. elegantula, *Kunth Revis. Gram.* i. 340, *Enum. Pl.* i. 346. P. elegans, *Roxb. Fl. Ind.* i 338. P. viscosa, var. *Herb. Heyne in Wall. Cat.* 3831 A.—Eragrost. *Wall. Cat.* n. 3830 B. C., 3831 A, 3832 B, 3833, 3840, 3843, 3845 A (*in part*).

Throughout INDIA, BURMA and CEYLON (*Wallich*, *Gardner*).

Stem tall, 1–3 ft., suberect from a spreading base, usually stout and branching, but sometimes slender and short, smooth. *Leaves* few, short, smooth, flat or subconvolute; mouth of sheath bearded. *Panicle* nodding, branches rather distant, spreading, ramifying from above the base, sometimes abbreviated and the spikelets clustered on the rachis, rachis glabrous. *Spikelets* purplish or green; empty gls. $\frac{1}{25}$ in.; flg. gls. $\frac{1}{15}$–$\frac{1}{14}$ in., lateral nerves slender; internodes of rachilla $\frac{1}{70}$–$\frac{1}{50}$ in.; palea rather shorter than its gls. *Stamens* 3, anthers about $\frac{1}{32}$ in. *Grain* oblong, $\frac{1}{32}$ by $\frac{1}{70}$–$\frac{1}{60}$ in.

12. **E. elongata,** *Jacq. Eclog. Gram.* 3, t. 3; perennial, panicle very variable, branches usually simple, spikelets very shortly pedicelled rather crowded subparallel linear $\frac{1}{6}$–$\frac{1}{10}$ in. 10–25-fld., rachilla rather stout, empty gls. ovate-lanceolate acute, I 1-nerved, II 1–3-nerved, flg. gls. ovate-lanceolate very acute nearly flat, keel almost straight, palea strongly curved, keels very stout scabrid. E. bahiensis, *Hance in Journ. Linn. Soc.* xiii. (1873) 136; *Griseb. in Goett. Nachr.* (1868) 76 (*non Schrad.*). E. Browneana, *Nees in Nov. Act. Nat. Cur.* xix. *Suppl.* i. (1843) 205. E. Brownii, *Nees Fl. Afr. Austr.* 396; *Steud. Syn. Gram.* 279; *Thwaites Enum. Pl. Zeyl.* 373; *Trim. Cat. Ceyl. Pl.* 109; *Benth. Fl. Hongk.* 432, *Fl. Austral.* vii. 646 (*in part*). E. Cumingii, *Steud. l. c.* 266. E. interrupta, *Steud. l. c.* 279 (*non Beauv.*). E. orientalis, *Nees in Nov. Act. l. c.* 206; *Thw. l. c.* 373; *Trim. l. c.* 109. E. pubescens, *Steud. l. c.* E. Willdenoviana, *Nees in Hook. & Arn. Bot. Beech. Voy.* 252. E. zeylanica, *Nees & Mey. in Nov. Act. l. c.* 204; *Thwaites l. c.*; *Trim. l. c.* Poa Brownei, *Kunth Revis. Gram.* i. 112, *Enum. Pl.* i. 333. ? P. dependens, *Hornem. Enum. Hort. Hafn. Suppl.* 2. P. elongata, *Willd. Enum. Hort. Berol.* i. 108; *Kunth Enum.* i. 384. P. interrupta & polymorpha, *Br. Prodr.* 180. P. pulchella, *Wall. mss.* Megastachya elongata & polymorpha, *Beauv. Agrost.* 74, 167. —Eragrost. *Wall. Cat.* n. 3836, 3845 (*in part*).

LOWER BENGAL, CHITTAGONG, BURMA, the NICOBAR ISLDS., and CEYLON (C.P. 931, 3047, 3251).—DISTRIB. Asia trop., Malaya, Australia, N. Caledon.

Stems tufted, stiff, tall or short, stout or slender, simple or branched. *Leaves* narrow, strict, flat or convolute; mouth of sheath bearded. *Panicle* oblong or ovate, with solitary distant spreading filiform branches, or from the shortening of these subspiciform, rachis glabrous. *Spikelets* acute, dark brown or reddish; gl. I $\frac{1}{25}$–$\frac{1}{16}$ in.; II $\frac{1}{17}$ in.; flg. gls. usually $\frac{1}{12}$ in., firm, lateral nerves rather prominent; rachilla rather stout, internodes $\frac{1}{50}$ in.; palea $\frac{1}{5}$–$\frac{1}{6}$ shorter than its gl. *Anthers* $\frac{1}{100}$–$\frac{1}{60}$ in. in the Indian specimens. *Grain* ovoid to subglobose, $\frac{1}{60}$ in.

†† Spikelets not fascicled, usually more or less divaricate when ripe.

§ *Spikelets* $\frac{1}{12}$–$\frac{1}{4}$ in. *broad*; *flg. gls. broad, more or less obtuse*, $\frac{1}{15}$–$\frac{1}{10}$ in. *long, lateral nerves strong.—Annuals.*

13. **E. barbulata,** *Stapf.*; leaf-margins eglandular, panicle oblong very loose, branches solitary, pedicels very slender, spikelets few $\frac{1}{3}$–$\frac{2}{3}$ in. ovate-oblong or linear narrowed upwards 10–25-fld., empty gls. subequal ovate obtuse, rachilla stout nodes bearded, fl. gls. close-set very broadly ovate obtuse, palea broadly ovate persistent keels scabrid, grain subglobose. —Eragrostis, *Wall. Cat.* n. 3839.

LOWER BURMA; road to the Petroleum Wells, *Wallich*.

Annual, erect, 3–4 ft. high, branched. *Leaves* 12–18 in., up to $\frac{1}{4}$ in. broad, usually very narrow, subconvolute, and sheaths pubescent or villous below the middle. *Panicle* 6–12 in.; nodes of rachis woolly at the axils; branches very distant, scaberulous, spreading, flexuous, simple at the base; pedicels as long or longer than the pale olive-green spikelets. *Gl.* I 1-nerved; II 1–3-nerved; rachilla tough, internodes about $\frac{1}{70}$–$\frac{1}{80}$ in.; flg. gls. $\frac{1}{10}$ in., nerves strong. *Stamens* 3; anthers linear, about $\frac{1}{20}$ in. *Grain* $\frac{1}{30}$ in. long.—A stately species.

14. **E. tremula,** *Hochst. ex Steud. Syn. Gram.* 269; leaf-margins eglandular, panicle large ovate very loose branches solitary, pedicels very slender, spikelets versatile 1 in. or more linear narrowed upwards 10–70-fld., empty gls. subequal subobtuse, rachilla tough glabrous, flg. gls. close-set very broadly ovate subobtuse, palea obovate-oblong persistent keels scabrid, grain globose. *Duthie Fodd Grass. N. Ind.* 65, *t.* 79; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 382; *Boiss. Fl. Orient.* v. 581. E. multiflora, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1841) 401; *Dalz. & Gibs. Bomb. Fl.* 298; *Duthie Grass. N.W. Ind.* 38; *Aitchis. Cat. Panjab. Pl.* 169. E. rhachitricha, *Hochst. ex Miquel Analect. Bot. Ind.* ii. 25. Poa curvata, *Hb. Heyne ex Wall. Cat.* n. 3849. P. multiflora, *Roxb. Fl. Ind.* i. 338 (*non Forsk.*). P. tremula, *Lamk. Illust.* i. 185; *Kunth l. c.* 332.—Eragrost. *Wall. Cat. l. c.*

Northern India; from the PANJAB to BENGAL and BURMA, and southward to the CARNATIC.—DISTRIB. Affghan., Africa trop.

Annual. *Stems* densely tufted, suberect, 6–24 in., leafy chiefly at the sometimes hardened base. *Leaves* few, short, very narrow; mouth of sheath slightly hairy. *Panicle* often as long as the rest of the plant and 8 in. broad, nodding; rachis glabrous, axils bearded, branchlets and pedicels roughish; pedicels longer or shorter than the spikelets which are pale green or purplish. *Empty gls.* $\frac{1}{16}$–$\frac{1}{20}$ in., 1-nerved; internodes of rachilla $\frac{1}{50}$ in., thickened upwards; flg. gls. $\frac{1}{16}$–$\frac{1}{12}$ in., nerves strong; palea a little shorter than its gl. *Stamens* 3, anthers $\frac{1}{100}$ in. *Grain* hardly $\frac{1}{50}$ in. diam.

15. **E. major,** *Host. Gram. Austr.* iv. 14, t. 24; leaf-margins (in Indian specimens) glandular, panicle oblong to ovate-oblong stiff, branches subsolitary spreading, pedicels very short, spikelets $\frac{1}{6}$–$\frac{1}{3}$ in. ovate-oblong or linear few to 50-fld., empty gls. ovate acute, rachilla tough, flg. gls. broadly ovate subacute, palea broadly obovate much curved, keels scabrid or ciliolate, grain globose. E. flexuosa, *Steud. Syn. Gram.* 266; *Duthie Grass. N.W. Ind.* 37. E. megastachya, *Link Enum. Hort. Berol.* i. 187; *Kunth Enum. Pl.* i. 333; *Reichb. Ic. Fl. Germ.* t. 91; *Wight Cat.* n. 1778; *Thwaites Enum. Pl. Zeyl.* 373; *Trim. Cat. Ceyl. Pl.* 109; *Aitchis. Cat. Panjab Pl.* 169; *Duthie Grass. N.W. Ind.* 38, *Fodd. Grass. N. Ind.* 63, t. 75; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 382; *Ledeb. Fl. Ross.* iv. 382; *Boiss. Fl. Orient.* v. 580. E. multiflora, *Aschers. ex Boiss. l. c.* E. poaeoides, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 404. E. vulgaris *var.* megastachya, *Coss. et Dur. Fl. Alger.* 148. Poa cilianensis, *All. Fl. Pedem.* ii. 246, t. 91, f. 2. P. elegans, *Herb. Wight & Herb. Ham. ex Wall. Cat.* n. 3828 C. D. P. Eragrostis, *Cav. Ic.* i. 63, t. 92; *Sibth. Fl. Græc.* t. 73. P. flexuosa, *Roxb. Fl. Ind.* i. 339. P. multiflora, *Forsk. Fl. Æg. Arab.* 21. P. polymorpha, *Koen. ex Wall. l. c.* n. 3828 A. P. Roxburghiana, *Schult. Mant.* ii. 315. P. subsecunda, *Herb. Ham. ex Wall. l. c.* n. 3828 D. P. tortuosa, *Spreng. Syst. Veg.* i. 345. Megastachya Eragrostis, *Beauv. Agrost.* 74. Briza Eragrostis, *Linn. Sp. Pl.* 70; *Schreb. Besch. Græs.* ii. 74. B. oblonga, *Moench. Meth.* 185.—Eragrostis, *Wall. Cat.* n. 3828, 3837.

Throughout the PLAINS and lower HILLS of INDIA and BURMA, ascending to 5200 ft. in the Himalaya. CEYLON, (C.P. 3163).—DISTRIB. Westward to S. Europe, Asia trop. and subtrop.

Annual. *Stem* 1–2 ft., usually stout and branched, but very variable. *Leaves* flat, smooth, flaccid, narrow, rarely $\frac{1}{4}$ in. broad; sheath sparingly bearded. *Panicle* 2–8 in., sometimes contracted, rachis glabrous, branches stiff or flexuous, ramifying from or near the base. *Spikelets* slightly narrowed upwards, dark olive-grey; Gl. I, 1- or sub-1–3-nerved; II 3-nerved; flg. gls. $\frac{1}{12}$ in., uppermost usually empty and smaller, nerves strong; palea $\frac{1}{4}$–$\frac{1}{5}$ shorter than its gl. *Anthers* about $\frac{1}{60}$ in *Grain* $\frac{1}{50}$–$\frac{1}{35}$ in., loose within the turgid gl.

§§ Spikelets $\frac{1}{6}$–$\frac{1}{3}$ in.; fl. gls. less than $\frac{1}{16}$ in. or if longer then narrower and more or less acute.

‡ *Panicle rather stiff, branches and lateral pedicels usually short lateral nerves of flg. gls. strong.—Leaf-margins often glandular.*

16. **E. minor,** *Host Gram. Austr.* iv. 15, *Fl. Austr.* i. 135; leaf-margins glandular, panicle ovate or oblong rather stiff, branches solitary capillary ramifying from near the base, pedicels short, spikelets $\frac{1}{6}$–$\frac{1}{3}$ in. linear to ovate up to 12-fld., empty gls. subequal acute 1-nerved, flg. gls. broadly ovate obtuse, grain globose or ellipsoid-globose dorsally convex. E. poaeformis, *Link Hort. Berol.* i. 188; *Reichb. Ic. Fl. Germ.* t. 91; *T. Nees Gen. Fl. Germ. Monocot.* n. i. 55. E. poaeoides, *Beauv. Agrost.* 76; *Griseb. in Goett. Nachr.* (1868) 74; *Duthie Grass. N.W. Ind.* 38, *Fodd. Grass. N. Ind.* 65; *Aitchis. Cat. Panjab Pl.* 170; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 387; *Ledeb. Fl. Ross.* iv. 380; *Boiss. Fl. Orient.* v. 580. E. poaeoides β, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 404. Poa Eragrostis, *Linn. Sp. Pl.* 68 (*in part*); *Kunth Enum. Pl.* i. 332; *Schreb. Beschr. Græs.* ii. t. 38; *Host Gram. Austr.* ii. 50, t. 69. Briza Eragrostis, *Vill. Fl. Delph.* ii. 50 (*non Linn.*).

PLAINS of NORTHERN INDIA, ascending the Himalaya to 8000 ft., from the Panjab eastwards to Bengal. The CONCAN, *Jacquemont*, &c. WESTERN TIBET; Ladak, alt. 12–13,000 ft., *Thomson.*—DISTRIB. Westward to S. Europe, N. Asia.

Annual. *Stems* 6–18 in., densely tufted, slender. *Leaves* rather short, flat; mouth of sheath slightly bearded. *Panicle* 2–6 in., rachis glabrous, branches spreading when ripe. *Spikelets* pale green to dark purplish or olive-grey, glistening; rachilla tough; gls. I and II $\frac{1}{25}$–$\frac{1}{16}$ in., keel scabrid; flg. gls. $\frac{1}{16}$ rarely $\frac{1}{25}$–$\frac{1}{12}$ in., lateral nerves strong; palea $\frac{1}{6}$ shorter than its gl., obovate-oblong, keels scabrid or subciliate. *Stamens* 3, anthers $\frac{1}{100}$ in. *Grain* $\frac{1}{50}$ in. or more, dorsally rounded or slightly flattened.—The glands are a very constant character. A single Bombay specimen is *eglandular*, but placed here from its strong resemblance to glanduliferous specimens also from Bombay. The Tibetan specimens are very small, 1–6 in. high.

17. **E. Rottleri,** *Stapf*; leaf-margins eglandular, mouth of sheath naked, panicle oblong open rather stiff, branches solitary or lower geminate ramifying from near the base, pedicels of lateral spikelets very short, spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. linear 6–12-fld., empty gls. subequal, rachilla tough, flg. gls. oblong subacute, palea persistent, grain terete. E. viscosa, *Wight Herb. propr.* n. 1785, *in part.* Poa pauciflora, *Herb. Rottl.*

The CARNATIC; at Tranquebar, *Heyne*, *Rottler*, *Wight.*

Leaves 1–7 in., flat or more or less convolute. *Panicle* 2–6 in., rachis naked, branches filiform to capillary. *Spikelets* pale brown or white; empty gls. about $\frac{1}{25}$ in.: flg. gls. $\frac{1}{15}$–$\frac{1}{20}$ in., lateral nerves strong; palea rather shorter than its gl., keels scaberulous. *Stamens* 3, anthers about $\frac{1}{100}$ in. *Grain* $\frac{1}{50}$ in.—Rottler's *P. pauciflora* is a tall form with few spikelets. Wight's specimen has the stem viscid below the panicle as in *E. tenella* var. *viscosa*, with certain forms of which *P. Rottleri* has much in common. The persistent rachilla with deciduous glumes of *E. Rottleri* are as in *E. minor*, as are the scabrid not ciliate keels of the palea.

18. **E. Willdenoviana,** *Nees in Wight Cat.* n. 1779 (non in *Nov. Act. Nat. Cur.* xix. *Suppl.* i. (1843) 205); leaf-margins rarely glandular, panicle short ovate stiff open, branches solitary capillary, pedicels short, spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. by $\frac{1}{25}$ in. linear pale up to 25-fld., empty gls. very unequal, I minute hyaline nerveless, fl. gls. broadly elliptic acute, palea oblong persistent, grain truncate at both ends dorsally grooved. E. poaeoides, *Trim. Cat. Ceyl. Pl.* 109; *Herb. Ind. Or. H. f. & T.* (the *Carnatic* plant). Poa glabra & lævis, *Rottl. mss.* ? P. polymorpha, *Koen. ex Rottl. in Schrift. Naturf. Fr. Berl.* iv. (1803) 194.—Eragrostis, *Wall. Cat.* n. 3848.

MYSORE, *Rottler*, *Heyne*; Dindygul, *Wight*. CEYLON; Trincomalee, *Glenie* (C.P. 3944).

Annual. *Stems* 4–18 in., very slender, smooth, rigid, erect or geniculately ascending. *Leaves* short, flat, narrow, erect, rather rigid; mouth of sheath naked. *Panicle* 1–3 in., branches spreading when ripe, ramifying from near the base; pedicels (except sometimes the terminal) shorter than the spikelets. *Spikelets* olive-grey or greenish; gl. I $\frac{1}{50}$–$\frac{1}{36}$ in; II ovate, acute, $\frac{1}{25}$ in., 1-nerved; flg. gls. $\frac{1}{15}$–$\frac{1}{20}$ in., lateral nerves strong; palea $\frac{1}{5}$–$\frac{1}{4}$ shorter than its gl., keels scaberulous. *Stamens* 3, anthers about $\frac{1}{100}$ in. *Grain* oblong, $\frac{1}{35}$–$\frac{1}{60}$ in., dorsally flattened and grooved.—This may prove to be E. polymorpha, *Roem. & Sch. Syst.* ii. 575. Rottler's specimen was named *P. polymorpha*, but that name was crossed out and replaced by *P. glabra*, Nob *E. Willdenoviana*, Nees in Hook. & Arn. Bot. Beech. Voy. (of China) is *E. elongata*.

‡‡. *Panicle very loose, ramifications very slender often flexuous or flaccid; lateral nerves of flg. gls. usually faint.—Leaves eglandular.*

19. **E. tenuifolia,** *Hochst. in Flora,* xxiv. (1841) i. *Intell.* 20, *name only; ex Steud. Syn. Gram.* 268; perennial, panicle oblong to ovate very open, rachis glabrous, branches solitary or 2-nate distant, spikelets ^{2}–$\frac{1}{12}$ in. by $\frac{1}{6}$ in. linear 5–15-fld., empty gls. very unequal, I minute hyaline, rachilla tough, fl. gls. ovate acute, subacute or apiculate, palea $\frac{1}{3}$ shorter than its gl. strongly curved persistent, grain obovate-oblong. E. collocarpa, *K. Schum. in Engl. Pflanzenw. Deutsch-Ost. Afr.* C. 114. ? E. mucronata, *Roem. & Sch. Syst.* ii. 577. E. parviglumis, *Hochst. ex Steud. l. c.* 267. Poa tenuifolia, *A. Rich. Tent. Fl. Abyss.* ii. 425.

NILGHIRI HILLS, *Hohenacker*. BELGAUM, *Ritchie*; Satpura Hills, *Thompson*.—DISTRIB. Africa trop.

Stem 2–3 ft., erect, slender, branched. *Leaves* long, very narrow; mouth of sheath naked. *Panicle* 3–6 in.; branches ramifying from near the base and branchlets rather distant, spreading, filiform, stiff, shorter than in *E. nigra*. *Spikelets* olive-grey; gl. I $\frac{1}{50}$–$\frac{1}{30}$ line nerveless; II remote from I, about $\frac{1}{30}$ in., ovate, subacute, nerveless or faintly 1-nerved; flg. gls. $\frac{1}{12}$ in., keels of palea scabrid. *Stamens* 3, anthers $\frac{1}{25}$ in. *Grain* $\frac{1}{12}$ in., slightly compressed, dorsally grooved.

20. **E. papposa,** *Steud. Nom. Ed.* II. i. 564; perennial, panicle ovoid very delicate lax open sparingly branched, rachis glabrous, branches solitary rarely 2-nate branchlets stiff divaricate, pedicels long capillary, spikelets $\frac{1}{6}$–$\frac{1}{3}$ in. linear 7–23-fld., empty gls. subequal or I shorter hyaline, rachilla tough, flg. gls. broadly ovate margins above hyaline, palea obtuse denticulate persistent, grain obovoid. *Willk. & Lange Prodr. Fl. Hispan.* i. 83; *Griseb. in Goett. Nachr.* (1868) 75. E. atro-virens, *Lange in Koebj.*

Vedinsk. Meddel. (1860) 47 (*non Desf.*). E. rigidi *Div. Forsk.* (*nomen.*). E. speirostachya, *Coss. et* verticillata, *Coss. ex Lange l. c.* (*non Cav.*). E. vulgaris, *Coss. et Dur. Fl. Alger.* 148. Poa nigra, *Clem. ex Willk.* *Fl. Hisp.* i. 83. P. papposa, *Desf. in Roem. & Sch. Syst.* ii. 5 stachya? papposa, *Roem. & Sch. l. c.*

N.-EASTERN PANJAB; common in the Trans-Indus districts; Rawul Pindi, &c., *Stewart, Aitchison.*—DISTRIB. Westward to Arabia, N. Africa, and Spain.

Stem 12–18 in., very slender, simple. *Leaves* short, strict, very narrow, convolute; mouth of sheath bearded with long silky hairs. *Panicle* 4–8 in.; rachis filiform; branches spreading, alternate, almost capillary, naked below, loosely branched beyond the middle with capillary spreading branchlets. *Spikelets* very pale yellow or dark or pale olive-grey; gl. I $\frac{1}{35}$–$\frac{1}{25}$ in. or less, nerveless; II $\frac{1}{25}$–$\frac{1}{20}$ in., faintly 1-nerved; flg. gls. about $\frac{1}{17}$ in.; palea rather shorter, keels scabrid. *Stamens* 3, anthers $\frac{1}{100}$ in. *Grain* $\frac{1}{50}$–$\frac{1}{36}$ in., dorsally grooved.—A very elegant species, with usually quite pale very narrow spikelets.

21. **E. pilosa,** *Beauv. Agrost.* 71; annual, panicle oblong to pyramidal flaccid open or contracted, rachis glabrous or hairy, branches usually more or less whorled and branchlets very slender, pedicels longer or shorter than the spikelets which are $\frac{1}{5}$ in. linear 5–12-fld., empty gls. unequal hyaline, rachilla tough, flg. gls. ovate acute, palea subpersistent keels scaberulous, grain ellipsoid. *Reichb. Ic. Fl. Germ.* t. 91; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 55; *Thw. Enum. Pl. Zeyl.* 373; *Trim. Cat. Ceyl. Pl.* 209; *Wight Cat.* n. 1784, 1784b.; *Duthie Grass. N.W. Ind.* 38, *Fodd. Grass. N. Ind.* 64; *Aitchis. Cat. Panjab Pl.* 170; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 381, *Ledeb. Fl. Ross.* iv. 382; *Boiss. Fl. Orient.* v. 881; *Benth. Fl. Hongk.* 432, *Fl. Austral.* vii. 645; *Baker Fl. Maurit.* 455; *Griseb. Fl. Brit. W. Ind.* 532. E. elegantula, *a*, *Nees in Wight Cat.* n. 1782. E. indica, *Steud. Syn. Gram.* 264. E. parviflora, *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 411. E. pellucida, *Steud. l. c.* 279. E. punctata, *Link. ex Steud. Nom. Ed.* II. i. 561, *Syn. Gram.* 264. E. verticillata, *Roem. & Sch. Syst.* ii. 575; *Reichb. Ic. Fl. Germ.* t. 9; *Aitchis. Cat. Panjab Pl.* 170. Poa amabilis, *Herb. Heyne ex Wall. Cat.* n. 3829 B. P. indica, *Koen. ex Rottl. in Ges. Naturf. Fr. Berl. Neue Schrift.* iv. (1803) 194. P. nutans, *Herb. Wight ex Wall. Cat.* n. 3829 D. P. parviflora & pellucida, *Br. Prodr.* 180. P. Phullica, *Herb. Ham. ex Wall. l. c.* 3829 C. & 5012 (*Phulcia*). P. pilosa, *Linn. Sp. Pl.* 68; *Host Gram. Austr.* ii. 168, t. 68; *Kunth l. c.* 329. P. punctata, *Linn. f. Suppl.* 109; *Kunth Enum. Pl.* i. 330; *Roxb. Fl. Ind.* i. 338. P. tenella, *Herb. Heyne ex Wall. l. c.* 3829 B. P. verticillata, *Cav. Ic.* i. 63, t. 93; *Kunth Enum.* 329. Milium tenerum, *Herb. Heyne ex Wall. l. c.* 3829 B.—Eragrostis, *Wall. Cat.* n. 3829.

Throughout INDIA and BURMA; ascending the Himalaya to 5000 ft. or more. CEYLON; common (C.P. 929).—DISTRIB. S. Europe and most warm countries.

Stem 3 in.–3 ft., tufted, erect, usually very slender and simple, rarely stout and branched. *Leaves* short, narrow, flaccid or strict and convolute, rarely elongate; mouth of sheath bearded. *Panicle* very variable in size and form, erect inclined or nodding; rachis hairy or not at the nodes; branches filiform or capillary, fascicled or sub-whorled, simple below, lower sometimes 6 in. long. *Spikelets* usually grey tipped with purple; empty gls. nerveless or II faintly 1-nerved; flg. gls. $\frac{1}{10}$–$\frac{1}{8}$ in. *Stamens* 3, anthers $\frac{1}{60}$ in., violet. *Grain* $\frac{1}{18}$–$\frac{1}{15}$ in., base laterally apiculate.—Dwarf specimens 2–4 in. high look very different from the ordinary state of the plant.

ex Steud. Nom. Ed. II. i. 563, *Syn. Gram.* 267;
ths narrow terete or obscurely compressed, panicle
arge open lax-fld., branches usually many in whorls or
y solitary or geminate, spikelets up to $\frac{1}{6}$ in. linear to oblong
mpty gls. subequal acuminate strongly 1-nerved, flg. gls. ovate
, palea obtuse denticulate persistent, grain short truncate at both ends. *Griseb. in Goett. Nachr.* (1868) 75; *Duthie Grass. N.W. Ind.* 38. E. atropurpurea, *Hochst. ex Steud. Syn. Gram.* 267. E. amabilis, *Willd. non Linn. ex Ham. in Wall. Cat.* n. 3842. E. paniculata, *Thwaites Enum. Pl Zeyl.* 373 (*non Steud.*).—Eragrostis, *Wall. Cat.* n. 3834, 3835, 3842, 3846.

Temp. and trop. HIMALAYA, ascending to 9000 ft. from Simla to Sikkim and the KHASIA HILLS, and southward throughout the DECCAN PENINSULA. CEYLON, *Thwaites* (C.P. n. 2626).

Stem 6 in.–3 ft., erect, stout or slender, usually stout and leafy at the base, simple or branched. *Leaves* in small forms chiefly basal and flat, in taller elongate; mouth of sheath bearded. *Panicle* up to 2 ft. long and broad, very copiously but loosely branched except in small specimens, rachis glabrous at the nodes, branches simple below, pedicels usually longer than the spikelets. *Spikelets* olive-grey; empty gls. membranous, keels scabrid; flg. gls. $\frac{1}{16}$–$\frac{1}{14}$ in. *Stamens* 3, anthers $\frac{1}{50}$ in. *Grain* $\frac{1}{32}$ in. or smaller, dorsally slightly grooved.—Habit as variable as of *E. pilosa.*

23. **E. ferruginea,** *Beauv. Agrost.* 71; perennial?, basal sheaths broad compressed keeled, panicle oblong, branches solitary or 2-nate filiform rather stiff, pedicels longer than the spikelets, spikelets $\frac{1}{4}$ in. linear to ovate 3–11-fld., empty gls. unequal acute 1-nerved, rachilla tough, flg. gls. ovate acute or acuminate, palea obtuse much shorter than its gl. persistent keels scabrid, grain obovoid truncate at both ends. *Franch. & Sav. Enum. Pl. Jap.* ii. 177; *Miq. Prolus. Fl. Jap.* 188. E. orientalis, *Trin. in Bunge Enum. Pl. Chin. Bor.* 71, *in Mem. Acad. Petersb. Ser.* VI. iv. II. (1838) *Suppl.* 73. Poa ferruginea, *Thunb. Fl. Jap.* 50.

SIKKIM HIMALAYA; Lachoong Valley, alt. 9000 ft., in meadows with *E. nigra*, J. D. H.—DISTRIB. N. China, Japan.

Stem with the panicle in the Sikkim specimen 18 in., erect. *Leaves* 3–5 in., narrow, or the lower broad at the base; sheath naked at the mouth. *Panicle* 4–6 in., shorter than in *E. nigra*, with stouter branches and fewer spikelets; branches rather wiry, bearing few dark spikelets. *Spikelets* dull green to violet. *Gl.* I about $\frac{1}{6}$ in., shorter than II; flg. gls. $\frac{1}{11}$–$\frac{1}{9}$ in. *Stamens* 3, anthers $\frac{1}{12}$ in. or less. *Grain* $\frac{1}{12}$ in., slightly grooved or flattened dorsally.—I have seen only a poor Indian specimen, but it seems to be identical with the Chinese and Japanese plant. Bunge says that the same plant is cultivated in Hort. Petrop. from Nepal seeds.

B. Sect. III. DESMOSTACHYA, Stapf. *Spikelets* much compressed, imbricate, secund, sessile and jointed on the very short densely crowded branchlets of a tall narrow racemiform panicle, deciduous, acute; rachilla subarticulate.

24. **E. cynosuroides,** *Beauv. Agrost.* 71, 162; perennial, tall, branched from the base, leafy, panicle linear-elongate, branches very short crowded, densely covered from the base with sessile imbricating much compressed deflexed spikelets $\frac{1}{2}$ in. long up to 30-fld., empty gls. very unequal, rachilla tough, flg. gls. broadly ovate acute, palea shorter than its gl. *Steud. Syn. Gram.* 264; *Wight Cat.* n. 1774, 1774b.; *Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 415; *Dalz. & Gibs. Bomb. Fl.* 298; *Aitchis*

Cat. Panjab. Pl. 169; *Duthie Grass. N.W. Ind.* 37, *Fodd. Grass. N. Ind.* 62, t. 40; *Boiss. Fl. Orient.* v. 583; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 387. Poa cynosuroides, *Retz. Obs.* iv. 20; *Roxb. Fl. Ind.* i. 333; *Del. Fl. Ægypt.* 159, t. 10; *Grah. Cat. Bomb. Pl.* 236; *Kunth Enum. Pl.* i. 227. Leptochloa bipinnata, *Hochst. in Flora*, xxxviii. (1855) 422. Briza bipinnata, *Linn. Syst. Nat.* x. 875. Cynosurus durus, *Forsk. Fl. Ægypt. Arab.* 71. Dactylis interrupta, *Herb. Rottl.* Uniola bipinnata, *Linn. Sp. Pl. Ed.* II. 104.—Eragrost. affine & Eragrostoides, *Wall. Cat.* n. 3821, 5016.

Plains of India, from Peshawur and Sind to Burma and southward, in moist places. (Not in Ceylon).—Distrib. Westward to Syria and N. Africa.

Rootstock stout, creeping; stolons very stout clothed with shining sheaths; stems 1-3 ft., tufted, smooth, erect, stout. *Leaves* many, basal fascicled, very long, rigid, long acuminate tips filiform, margins hispid; mouth of sheath with long hairs; ligule 0. *Panicle* 6–18 in. by 1 rarely 2 in. broad, strict, erect, narrowly pyramidal or columnar, often interrupted; rachis puberulous, branches $\frac{1}{4}$–1 in., very many crowded; branchlets rigid, glabrous or hispidulous, spreading. *Spikelets* unilateral, 2-seriate and crowded, deflexed, pale brown, rather shining; internodes of rachilla very short; gl. I $\frac{1}{50}$ in.; II about $\frac{1}{15}$ in., obtuse; flg. gls. $\frac{1}{16}$–$\frac{1}{12}$ in., coriaceous; palea $\frac{1}{5}$–$\frac{1}{6}$ shorter than its gl., rather coriaceous, keels minutely scabrid. *Stamens* 3, anthers $\frac{1}{25}$ in. *Grain* less than $\frac{1}{40}$ in., obliquely ovoid, laterally compressed, obscurely trigonous.

C. Sect. IV. Plagiostachya, *Benth.* Spikelets secund distichously spreading in a long simple slender terminal spike.

* *Keels of palea distinctly winged.*

25. **E. leioptera,** *Stapf.*; perennial, leaves convolute wiry, spikelets $\frac{1}{3}$–$\frac{1}{2}$ in. oblong compressed 10–20-fld., glumes tumid, I $\frac{1}{14}$ in. acute, wings of keels of palea $\frac{1}{100}$ in. broad eciliate.

Khasia Hills, alt. 4–5000 ft., *Griffith*, &c.

Stems 1–2 ft., densely tufted, erect, very slender, strict. *Leaves* 8–12 in., glabrous, stout, terete, pungent; sheaths short. *Spike* 6–10 in., erect, strict; rachis angular, smooth. *Spikelets* not crowded, suberect; empty glumes $\frac{1}{14}$ in. subequal, or I shorter; I acutely keeled; II dorsally rounded; flg. gls. broadly ovate, obtuse or subacute, $\frac{1}{10}$ in.; wings of palea hyaline. *Anthers* about $\frac{1}{16}$ in. long.—The more tumid glumes at once distinguish this from *E. bifaria.*

26. **E. bifaria,** *Wight ex Steud. Nom. Ed.* II. i. 562, *Syn. Gram.* 264, *Suppl.* 282; perennial, leaves flat or complicate and keeled, spikelets $\frac{1}{4}$–$\frac{2}{3}$ in. ovate-oblong rarely linear much compressed 6–40-fld., wings of keels of palea about $\frac{1}{100}$ in. broad ciliate. *Wall. Cat.* n. 3827 B. C.; *Wight Cat.* n. 1773; ? *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 387. E. thraulostachys, *K. Schum. ined.* Poa bifaria, *Vahl Symb.* ii. 19; *Roxb. Fl. Ind.* i. 331; *Kunth Revis. Gram.* i. 334, t. 80, *Enum. Pl.* i. 327, *Suppl.* 282.

The Deccan Peninsula, *Heyne*, &c.—Distrib. Africa trop.

Stem 1–3 ft., densely tufted, erect, simple, subcompressed, glabrous, base clothed with the soft fibres of old sheaths. *Leaves* 2–2$\frac{1}{2}$ in., linear, wiry, sometimes $\frac{1}{6}$ in. broad, flexuous, acute, rigid, smooth; sheaths scaberulous, keeled; ligule a ciliate line. *Spike* 10–12 in., ovate to oblong and 15–20-fld., rarely linear flexuous and up to 40-fld., erect, rachis smooth, subcompressed. *Spikelets* spreading, lower fewer-fld., olive-grey or -green; gl. I very acute or acuminate; II almost $\frac{1}{12}$ in., keel very stout, rounded; flg. gls. $\frac{1}{8}$ in., broadly ovate, subacuminate, keel scaberulous above, nerves faint. *Stamens* 3, anthers $\frac{1}{25}$ in.

27. **E. Collettii,** *Stapf*; perennial, leaves filiform convolute, spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. linear or oblong-linear slightly compressed 6–12-fld., glumes tumid, wings of keels of palea about $\frac{1}{200}$ in. broad minutely ciliate.

BURMA; Pinmona, *Abul Huk*; Meiktalla, *Collett*.

Stems 18–20 in., densely tufted, very slender, bases densely clothed with a brush of soft filiform fibres $\frac{3}{4}$ in. long. *Leaves* 2–4 in., glabrous or sparsely hairy. *Spike* 5–7 in., erect, strict or slightly curved; rachis slender, terete, smooth. *Spikelets* purplish, erect, close-set, almost imbricating; empty gls. subequal, $\frac{1}{16}$–$\frac{1}{14}$ in., I acutely keeled; II dorsally rounded; flg. gls. $\frac{1}{12}$ in. or less, turgid, broadly ovate, obtuse or acute with incurved tips; palea almost as long as the gl., dorsally pubescent. *Anthers* almost $\frac{1}{25}$ in.

** *Keels of palea not or obscurely winged.*

28. **E. nardoides,** *Trin. in Mem. Acad. Petersb.* VI. i. (1831) 415; perennial leaves 3–9 in. almost capillary convolute with tufts of hairs on the surface below the middle, spike very long slender, spikelets $\frac{1}{3}$–$\frac{1}{2}$ in. and upwards oblong to linear 20–32-fld., glumes turgid. E. bifaria, *Wall. Cat.* n. 3827 D. F.; *Duthie Grass. N. W. Ind.* 36; *Fodd. Grass. N. Ind.* 61, t. 73; *Griseb. in Goett. Nachr.* (1863) 76; *Steud. Syn. Gram.* 266.

OUTER HIMALAYA, from the Panjab to Nepal, up to 5500 ft. BEHAR, on Parasnath, and CHOTA NAGPORE, *Clarke, J. D. H.*

Stems 12–18 in., densely tufted, filiform. *Leaves* as long as the stem or shorter. *Spike* 6–10 in., very slender, straight or subflexuous; rachis terete, smooth. *Spikelets* erecto-patent, close-set, laterally compressed, olive-green; empty gls. subequal or I slightly shorter, acutely keeled; II $\frac{1}{12}$ in. or less, obtusely keeled; flg. gls. nearly $\frac{1}{12}$ in., ovate, acute or subobtuse, nerves faint, keel smooth or nearly so. *Anthers* $\frac{1}{25}$ in. *Grain* $\frac{1}{60}$ in. or more, narrowly ellipsoid or subovoid, subterete or obscurely triquetrous, epicarp finely reticulate.

29. **E. coromandelina,** *Trin. in Mem. Acad. Petersb.* VI. i. (1831) 415; perennial, leaves 1–3 in. filiform convolute puberulous above, spikelets $\frac{1}{6}$–$\frac{1}{2}$ by $\frac{1}{12}$ in. oblong to linear 10–32-fld. *Steud. Syn. Gram.* 264. E. cretacea, *Nees in Ann. Nat. Hist.* i. (1838) 284. Poa coromandelina, *Koen. ex Rottl. in Ges. Naturf. Fr. Berl. Neue Schrift.* iv. (1803) 191; *Roth. Nov. Pl. Sp.* 71; *Kunth Enum. Pl.* i. 327. P. secunda, *Roxb. Ic. pict. ined.* t. 827.

PLAINS OF INDIA; from Rajputana to Behar, and southwards. CHOTA NAGPORE, *Wood*. UPPER BURMA, *Abdul Huk*.

Stem 12–18 in., rather stout. *Leaves* short, rarely flat, spreading and recurved. *Spike* 4–8 in., interrupted; rachis slender, terete, smooth. *Spikelets* close-set, erecto-patent, laterally compressed, olive-grey or -green; empty gls. equal or I slightly shorter, acutely keeled; II $\frac{1}{12}$ in. or less, usually obtusely keeled; flg. gls. up to $\frac{1}{12}$ in., ovate, acute or subobtuse, nerves faint, keel smooth or nearly so; palea almost as long as its gl., keels sometimes obscurely winged scabrid. *Stamens* 3, anthers $\frac{1}{32}$ in. *Grain* $\frac{1}{50}$–$\frac{1}{36}$ in., shortly ellipsoid or subovoid, obtusely 3-quetrous, epicarp loosely reticulate.

30. **E. secunda,** *Nees ex Steud. Syn. Gram.* 264; perennial, leaves 6–18 in. convolute or flat minutely puberulous above, spike very slender flaccid, spikelets $\frac{1}{2}$ in. linear-oblong up to 10-fld., empty gls. unequal. E. bifaria, *Thwaites Enum. Pl. Zeyl.* 373 (*excl. Syn.*); *Trim. Cat. Ceyl. Pl.* 109.

CEYLON, ascending to 5000 ft., *Walker*, *Thwaites* (C.P. 60).

Spikelets secund or distichous, laterally compressed, olive-grey or straw-colrd.; empty gls. unequal, I about $\frac{1}{12}$ in. acutely keeled; II $\frac{1}{7}$ in., dorsally rounded; flg. gls.

$\frac{1}{8}$ in., ovate, acute; palea with rather narrow scabrid keels. *Anthers* $\frac{1}{16}$ in. long. *Grain* almost $\frac{1}{25}$ in., elongate ovoid or ellipsoid, almost terete.—The materials for this species consist of only two specimens, one from Thwaites (C.P. 60), with leaves 6-7 in. convolute, erecto-patent; the other, from Walker, with much longer flat or subconvolute leaves 8-10 in. long.

31. **E. brachyphylla,** *Stapf*; perennial leaves $2\frac{1}{2}$–4 in. linear plicate glabrous above, spikelets $\frac{1}{4}$–$\frac{3}{4}$ in. oblong to linear about 20-fld., empty gls. subequal. E. bifaria, *Wall. Cat.* n. 3827 A. E. E. bifaria, β. minor, *Wight & Arn. in Wight Cat.* n. 1773 C. & *Herb.* n. 3528, 3356. Poa secunda, *Roxb. ex Wall. Cat. l. c.* A. P. bifaria, *Vahl*, & P. coromandelina, *Roth. ex Wight Cat.* n. 1773b.

From BEHAR and the CENTRAL PROVINCES, southward to the Nilghiris, *Wight*, *Perrottet*.

Stem densely tufted, 10–18 in., slender. *Leaves* coriaceous, acute, rarely flat and $\frac{1}{10}$ in. broad. *Spikes* 3–6 in., slender. *Spikelets* close-set, usually secund, slightly compressed, olive-green; empty gls. up to $\frac{1}{12}$ in., I acute, acutely keeled; II obtuse, dorsally rounded; flg. gls. up to $\frac{1}{12}$ in., broadly ovate, obtuse, keel scaberulous below the tip; keels of palea narrow, scabrid. *Anthers* $\frac{1}{32}$ in. *Grain* $\frac{1}{50}$–$\frac{1}{36}$ in., shortly ellipsoid, obscurely triquetrous, almost terete, epicarp coarsely reticulate.

INDETERMINABLE SPECIES RECORDED AS INDIAN.

E. cernua, *Steud. Syn. Gram.* 266. Poa cernua, *Willd. in Ges. Naturf. Fr. Berl. Neue Schrift.* iv. (1803) 182.

E. confinis, *Nees ex Steud. l. c.* 265.

105. MYRIOSTACHYA, *Hook. f.*

A tall stout perennial glabrous grass. *Leaves* very long, flat. *Spikelets* 4–20-fld., racemed on the short branchlets of a narrow elongate panicle, pedicels jointed at the base; rachilla stout, flexuous, naked, at length jointed at the base and between the fl. gls. *Glumes* coriaceous, dorsally rounded, I and II very small, ovate, 1-nerved, keeled, long-awned; flg. gls. ovate, cuspidately acuminate, keeled, 3-nerved; palea coriaceous, as long as its gl., tip 2-toothed, keels close together stout scabrid-ciliate. *Lodicules* very minute, obliquely cuneate, retuse. *Stamens* 3, anthers very small. *Ovary* globose, styles united at the very base, stigmas long penicillate. *Grain* obliquely ovoid, obtuse, subterete, scutellum large.—*Eragrostis*, Sect. Myriostachya, *Benth. in Journ. Linn. Soc.* xix. (1881) 117.

M. Wightiana, *Hook. f.* Eragrostis Wightiana, *Benth. in Hook. Ic. Pl.* xiv. 62, t. 1381. Leptochloa Wightiana, *Nees ex Steud. Syn. Gram.* 209; *Wight Cat.* n. 1757. Dinebra verticillata, *Wight ex Steud. l. c.* Festuca natans, *Ham. in Wall. Cat.* n. 3823.—Eragrost. affine, *Wall. l. c.*

Marshes in the SUNDERBUNDS, *Hamilton*, *Griffith*, &c. S. INDIA? *Herb. Wight.* TENASSERIM, *Helfer*.

Stem 6–10 ft., densely tufted, erect from a stout sheathed sometimes floating rootstock with long branching roots, as thick as the thumb at the base, smooth, simple or sparingly branched. *Leaves* several feet long, up to $\frac{1}{2}$ in. broad, linear, finely acuminate, quite smooth; sheath very long, narrower than the blade, of lower leaves broad and compressed; ligule 0. *Panicle* 1–2 ft. by 2–3 in. broad; rachis quite smooth; branches 1–$1\frac{1}{2}$ in., very many, crowded fascicled and whorled erecto-patent, flowering to the base. *Spikelets* ¼–⅓ in., 4–8-fld., compressed, quite smooth; pedicels short; gls. I and II unequal, keels scaberulous, awn ⅓ in. or more stiff stout.—In many respects *Myriostachya* is allied to *Eragrostis cynosuroides*, having a very similar inflorescence, and spikelets jointed on the branchlets of the panicle; but differs in the spikelets being pedicelled, in the long awned gls. I and II, and in its great size.

Var. *longispicula*; spikelets longer, up to ½ in. and 8–20-fld.—Penang, *Curtis.* Ceylon; at Kottiyar, *Trimen.*

106. **HALOPYRUM,** *Stapf.*

A tall stout perennial glabrous grass, with a branching creeping sheathed rootstock. *Leaves* narrow, rigid, convolute. *Spikelets* large, many-fld., sessile or shortly pedicelled on the short alternate branches of an elongate panicle, ovate, strongly laterally compressed, not jointed on their pedicels, nor are the pedicels on the branches; rachilla jointed at the base and between the flg. glumes, silkily hairy. *Glumes* many, closely distichously imbricate, dorsally rounded, coriaceous, keeled, I and II subequal, empty, ovate-lanceolate, acuminate or apiculate; I 3-nerved, II 5-nerved; flg. gls. 6–10, rather shorter than the empty, mucronulate, 3-nerved; palea as long as the gl., subacute, 2-keeled. *Lodicules* 2, obcordate. *Stamens* 3. *Styles* short, free, stigmas elongate. *Grain* ellipsoid, compressed, deeply hollowed anticously, free.

H. mucronatum, *Stapf in Hook. Ic. Pl.* t. 2448. Brizopyrum mucronatum, *Nees in Wall. Cat.* n. 8898; *Wight Cat.* n. 2386. Desmazeria unioloides, *Defl. Voy. Yemen*, 220. Eragrostis mucronata, *Trim. Cat. Ceyl. Pl.* 109 (*non Roem. & Sch.*). ? Uniola mucronata, *Linn. Sp. Pl.* 104; *Kunth Enum. Pl.* i. 425; *Steud. Syn. Gram.* 281. Triticum repens, *Thwaites Enum. Pl. Zeyl.* 376.—Æluropus, *Aitchis. Cat. Panjab Pl.* 169. —Eragrostis sp. Sect. Sclerostachya, *Benth. in Gen. Plant.* iii. 1187.

Coasts of INDIA from Sind to Cape Comorin and Tinnevelly. CEYLON, *Gardner*, &c.—DISTRIB. Westward to Arabia and E. trop. Africa.

Stem below creeping, as thick as a crow-quill, hard, smooth, woody, with strict vermiform roots, sending up rigid slender flowering stems 12–18 in. high, and shorter leafing ones. *Leaves* 8–12 in., flat or convolute, very narrow, wiry, glaucous, finely acuminate, glabrous, sheath terete, appressed, striate, hard, mouth villous; ligule a few hairs. *Panicle* 12–16 in., erect or inclined; branches short with few spikelets and rachis quite smooth. *Spikelets* ½ in. long, sessile or shortly pedicelled, smooth, white or pale yellowish; rachilla very short, hairs half as long as the gls.; gl. I hardly longer than the lowest flg. gl., ovate-lanceolate, apiculate, 5-nerved towards the centre; II ⅓ longer, strongly 5-nerved.—There being no specimen of *Uniola mucronata* in Linnæus's Herbarium its citation here is doubtful.

107. **COELACHYRUM,** *Nees.*[1] (See p. 8.)

108. **DIPLACHNE,** *Beauv.*

Tall perennial grasses. *Leaves* flat or convolute, narrow. *Spikelets* many-fld., spicate on the slender simple branches of a tall simple panicle, not jointed at the base; rachilla jointed at the base and beneath each flg. gl., not produced beyond the uppermost gl. *Glumes* many, I and II unequal, obtuse, membranous, 1-nerved, persistent; flg. gls. rather longer, oblong, 1–3-nerved, tip 2–4-toothed, mucronate or awned; palea linear. *Lodicules* 2, broad. *Stamens* 3, anthers short. *Styles* distinct, stigmas plumose. *Grain* ovoid-oblong, subtrigonous, free within the gls. and palea.—Species about 14, of warm regions.

---

[1] This genus was erroneously supposed to be Indian when the Key was drawn up.

A second Indian species has lately been brought from Chitral, and will shortly be published by Dr. Stapf in the Kew Bulletin as *D. Gatacrei.*

D. fusca, *Beauv. Agrost.* 163; tall, leaves convolute, panicle long, spikelets ¼–½ in. linear 4–10-fld. *Benth. Fl. Austral.* vii. 619; *Boiss. Fl. Orient.* v. 561; *Trim. Cat. Ceyl. Pl.* 109. D. indica, *Spreng. Syst.* i. 351. Uralepis fusca, *Steud. Syn. Gram.* 247; *Thwaites Enum. Pl. Zeyl.* 372. U. Drummondii, *Steud. l. c.* Triodia ambigua, *Br. Prodr.* 183. Tridens indicus, *Nees in Wight Cat.* n. 1794. Leptochloa? fusca, *Kunth Revis. Gram.* i. 91, *Enum. Pl.* i. 271. Festuca fusca, *Linn. Sp. Pl.* 109; *Del. Fl. Ægypt.* 24, t. xi. f. 1. F. indica, *Retz. Obs.* iv. 21; *Kunth Enum.* 412. F. reptatrix, *Linn. Sp. Pl. Ed.* II. 108; *Kunth l. c.* 410. Eragrostis procera, *Steud. l. c.* 266. Poa procera, *Roxb. Fl. Ind.* i. 332; *Kunth l. c.* 345. Bromus polystachios, *Forsk. Fl. Æg. Arab.* 23. Eragrostis, *Wall. Cat.* n. 5013.—*Rheede Hort. Malab.* xii. t. 45.

UPPER GANGETIC PLAIN to BENGAL and southward to CEYLON.—DISTRIB. Egypt, Trop. Asia, Africa, and Australia.

Stem tufted, 3–5 ft., stout, erect, or geniculately ascending, often branched, clothed with leaf-sheaths. *Leaves* long, narrow, flat or convolute, smooth; sheaths smooth; ligule large, membranous, lacerate. *Panicle* 10–18 in., oblong, nodding; rachis smooth; branches 2–3 in., erect, filiform, smooth or scaberulous. *Spikelets* distant, very shortly pedicelled, pale or dark green; rachilla smooth or scaberulous; callus hairy; gls. I and II 1-nerved, tips erose, keels nearly smooth; I lanceolate; II ⅓ longer, oblong; flg. gls. thinly coriaceous, 3-nerved, lateral nerves submarginal, tip 4-toothed, mucronate by the percurrent median nerve.

109. **MELICA,** *Linn.*

Perennial erect grasses. *Leaves* narrow. *Spikelets* in open or spiciform or racemiform panicles, laterally compressed, jointed or not on their pedicels, 1–3-fld. and with small convolute neuter gls. forming a clavate or narrow body terminating and jointed on the elongate rachilla. *Glumes* 4 or more, membranous, hyaline or with hyaline tips and margins; I and II equal or unequal, empty, I 1–3-nerved; II 5-nerved, persistent or separately deciduous; flg. gls. solitary, or 2–3 then distant on the rachilla, 5–9-nerved, lowest stipitate; palea 2-keeled. *Lodicules* 2, connate, often most minute or 0. *Stamens* 3. *Styles* free, stigmas plumose. *Grain* oblong fusiform or subcylindric.—Species probably 20 or 30, of temp. regions.

* *Panicle spiciform or racemiform; spikelets more or less jointed on their pedicels; lodicules most minute or* 0.

1. **M. Cupani,** *Guss. Fl. Sicul. Prodr. Suppl.* 17; panicle subspiciform, flg. gl. solitary clothed all over with long silky hairs. *Boiss. Fl. Orient.* v. 590; *Parlat. Fl. Ital.* i. 301. M. ciliata, *Duthie Grass. N.W. Ind.* 39 (*non Linn.*). M. Jacquemontii, *Decne in Jacquem. Voy. Bot.* 174, t. 175; *Duthie l. c.* M. Hohenackeri, *Boiss. Diagn. Ser.* I. xiii. 54. M.

micrantha, *Boiss. & Heldr.* var. inæqualis, *Griseb. in Goett. Nachr.* (1868) 76. M. persica, *Kunth Revis. Gram.* i. 351, t. 89, *Enum. Pl.* i. 375, *Suppl.* 311; *Ledeb. Fl. Ross.* iv. 398; *Duthie l. c.*; *Griseb. l. c.* 76, 77. M. trachyantha, *Boiss. Diagn. Ser.* I. vii. 124.

WESTERN HIMALAYA; in the drier regions from Kumaon westwards, alt. 7–11,000 ft. WESTERN TIBET, alt. 8–11,000 ft.—DISTRIB. Westwards to Spain and N. Africa.

Stems 8–18 in., densely tufted, creeping below, very slender. *Leaves* 2–8 in., very narrow, flat or convolute, and as well as the sheaths glabrous puberulous or tomentose with spreading or reflexed hairs; ligule oblong, short, or 0. *Panicle* 2–4 in.; rachis filiform, smooth; branches very short and pedicels scaberulous. *Spikelets* more or less secund, $\frac{1}{6}$–$\frac{1}{3}$ in. long, suberect or spreading, pale straw-colrd. or dark purple; rachilla glabrous, very short slender and geniculate below the flg. gl., stouter and strict beyond it, articulate beneath the neuter gls. *Glumes* all scaberulous, I $\frac{1}{2}$–$\frac{1}{3}$ shorter than II, ovate, subacute, 1–3- rarely 5-nerved; II lanceolate, acute, 5-nerved; flg. gl. about as long as II, clothed with straight hairs nearly as long as itself that spread when dry, 7-nerved; palea oblong, 2-toothed, scaberulous, keels ciliolate; lower neuter gls. coriaceous, glabrous scabrid hispidulous or rarely sparsely hairy, usually obliquely clavate and truncate, rarely oblong, strongly nerved. *Lodicules* 0 or most minute. *Grain* fusiform.—A most variable plant, presenting, according to Boissier, eight varieties, and under which are ranged fourteen species of his own and other authors. The Indian specimens may be roughly classed under two very distinct-looking forms, which, but for Boissier's wider experience and authority, I should have been disposed to regard as species; though I find specimens which seem to be intermediate between them. These are, *M. Cupani*, Guss. (which includes *trachyantha*, Boiss.) with stems 12–18 in. high, pale straw-colrd. spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. long, with gl. II usually only about $\frac{1}{3}$ longer than I; and *M. persica*, Kunth (including *Jacquemontii*, Dcne.), with stems 6–12 in. high, purple (rarely pale yellowish) spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. long, and gl. II almost twice as long as I. In both the leaves or their sheaths or both, are glabrous or tomentose, and the club-shaped neuter gls. from nearly smooth to scabrid.

2. **M. nutans,** *Linn. Sp. Pl.* 66; panicle racemiform very lax, spikelets 2-fld., gls. I and II cymbiform very obtuse, III quite glabrous. *Fl. Dan.* t. 962; *Host Gram. Austr.* ii. 9, t. 10; *Gærtn. Fruct.* ii. 5, t. 80, f. 4; *Schreb. Gram.* ii. 62, t. 6, f. 2; *Engl. Bot.* t. 1059; *Knapp Gram. Britt.* t. 42; *Kunth Enum. Pl.* i. 376; *Cav. Ic.* t. 175; *Reichb. Ic. Fl. Germ.* t. 72; *Steud. Syn. Gram.* 291; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 60; *Ledeb. Fl. Ross.* iv. 399; *Boiss. Fl. Orient.* v. 568.

KASHMIR, *Falconer*; at Hirpoor, alt. 8000 ft., *Clarke*.—DISTRIB. Europe, N. Asia.

Stem 10–18 in., very slender, inclined, from a long stoloniferous rootstock. *Leaves* 6–10 in., very narrow, acuminate, sparsely hairy; ligule very short or 0. *Panicle* long, nodding or drooping, rachis and few branches secund, capillary. *Spikelets* $\frac{1}{4}$ in. long, few, distant, very shortly pedicelled, pendulous, broadly oblong; gls. I and II subequal, scarious, green or purplish; III oblong, strongly many-nerved, scaberulous. *Lodicules* minute, connate. *Grain* fusiform.

** *Panicle with spreading branches*; *spikelets not jointed on their pedicels*; *gl. I and II persistent*; *neuter gls. forming a small oblong body*; *lodicules 2, connate.*

3. **M. scaberrima,** *Hook. f.*; branches of panicle elongate opposite alternate or 3-nate, spikelets 3–5-fld., gls. I and II ovate-lanceolate, flg. gls. narrowly lanceolate. Festuca scaberrima, *Nees ex Steud. Syn. Gram.* 316. Glyceria scaberrima, *Steud. l. c.*; *Duthie Grass. N.W. Ind.* 41. Poa Zizania, *Jacquem. mss.*

Western Temperate Himalaya; from Kashmir to Kumaon, alt. 6–10,000 ft.

Stem 3–5 ft., very slender, flaccid, smooth. *Leaves* 8–10 by ⅙–⅓ in., more or less scabrid; sheaths scabrid, hirsute on the upper margins; ligule short, truncate, 2-auricled. *Panicle* very variable, rarely reduced to a subsimple raceme; rachis filiform; branches 2–5 in., at length horizontal, often 2 in. apart, smooth or scabrid. *Spikelets* often irregularly disposed, shortly pedicelled, crowded on short branchlets, or distantly scattered, ¼–½ in. long, pale green; rachilla slender, scaberulous; gl. I and II ovate-lanceolate, I 1-nerved; II 3-nerved; flg. gls. distant, lowest about twice as long as II, narrowly lanceolate, strongly 7–9-nerved, tip quite entire; palea shorter than its gl., keels scaberulous. *Lodicules* very minute. *Anthers* variable in length. *Grain* subcylindric or fusiform.—Closely allied to the Affghan *M. secunda,* Regel (M. gracilis, *Aitch. & Hemsl.*) a native of Affghan. and Turkestan.

Var. *micrantha*; spikelets ⅕ in., leaf-sheaths nearly smooth, ligule hardly auricled.—Kishtwar, alt. 6000 ft., *Clarke.*

110. **LOPHATHERUM,** *Brongn.*

Tall slender leafy perennial grasses. *Leaves* petioled, lanceolate, acuminate, nerves tessellate. *Spikelets* 1-fld., narrowly lanceolate, terete, solitary, secund and jointed on the long strict alternate branches of a lax panicle; rachilla not jointed at the base, produced beyond the flg. gl. and bearing several closely sheathing awned empty gls. *Glumes* dorsally rounded, I and II empty, oblong, obtuse, margins membranous, 5-nerved, deciduous with the flg. gl.; III much longer, coriaceous, ovate-oblong, 7–9-nerved, mucronate or shortly awned; keels of palea narrowly winged, smooth. *Lodicules* 0. *Stamens* 3. *Styles* connate at the base, stigmas long. *Grain* oblong, free.—Species 1 or 2, trop. Asia.

L. gracile, *Brongn. in Duperr. Voy. Bot.* 50, t. 8; *Kunth Enum. Pl.* i. 391; *Steud. Syn. Gram.* 300; *Benth. Fl. Hongk.* 433; *Thwaites Enum. Pl. Zeyl.* 374; *Trim. Cat. Ceyl. Pl.* 109; *Miq. Fl. Ind. Bat.* iii. 400. L. elatum, *Zoll. & Mor. Syst. Verz. Zoll.* 102. L. japonicum, multiflorum and dubium, *Steud. Syn. Gram.* 300. L. Lehmanni, *Nees ex Steud. l. c.* Acroelytrum japonicum, *Steud. in Flora,* xxix. (1846) 21. Allelotheca Urvillei, *Steud. Syn. Gram.* 117.—Centothecæ affine, *Wall. Cat.* n. 8900. —*Griff. Ic. Pl. Asiat.* t. 152, f. 2.

Tropical Himalaya, from Sikkim eastwards; the Khasia and Naga Hills, Burma, Ceylon (up to 4000 ft.), and the Malaya Peninsula.—Distrib. China, Japan, Malaya, N. Guinea.

Stem 2–5 ft., ascending from a branched woody rootstock. *Leaves* 4–10 by ½–1¼ in., narrowed into a slender petiole ¼–½ in. long; sheaths smooth; ligule minute. *Panicle* of few distant strict stiff smooth branches, 6–18 in. long. *Spikelets* ¼–⅓ in., including the short awns of the closely imbricate upper empty glumes, which form a pencil of short erect or spreading bristles projecting from the apex of the tightly rolled flg. gls.—It is remarkable that this plant has not been observed in the Deccan Peninsula.

DOUBTFUL SPECIES.

L. DUBIUM, *Steud. Syn. Gram.* 300.—*Herb. Wight.* n. 1090. The description is of leaves only, and quite unrecognizable.

111. **CENTOTHECA,** *Desv.*

Tall perennial grasses. *Leaves* broadly lanceolate, tessellately nerved. *Spikelets* 1–2-fld., secund on the long branches of a lax subsimple panicle, not jointed on the very short pedicels; rachilla jointed at the base and between the flg. gls. *Glumes* 5, I and II oblong-ovate, keeled, 3–5-nerved, empty, persistent; flg. gls. oblong, acute, dorsally rounded, 7-nerved, naked or the upper bearing soft erect at length deflexed tubercle-based spines above the middle; palea shorter than the gl., keels ciliolate. *Lodicules* 0. *Stamens* 2–3, anthers short. *Styles* free. *Grain* ovoid, acute, terete, free.—Species 1 or 3?, Trop. Asia, Africa, Australia.

C. lappacea, *Desv. in Nouv. Bull. Soc. Philom.* ii. (1810) 189, *& in Journ. Bot.* i. (1813) 70; *Beauv. Agrost.* 69, t. 14, f. 7; *Kunth Revis. Gram.* i. 317, t. 70, *Enum. Pl.* i. 366, *Suppl.* 302; *Steud. Syn. Gram.* 116; *Thw. Enum. Pl. Zeyl.* 374; *Trim. Cat. Ceyl. Pl.* 109; *Wall. Cat.* n. 3826; *Griff. Notul.* iii. 62, *Ic. Pl. Asiat.* t. 152, f. 1; *Miq. Fl. Ind. Bat.* iii. 398; *Benth. Fl. Austral.* vii. 640; *Hochst. in Bot. Zeit.* (1857) 33; *Lisboa in Journ. Bomb. Nat. Hist. Soc.* vii. (1893) 388. C. latifolia, *Trin. Fund. Agrost.* 141. C. parviflora, *Anderss. in Peters. Reise Mosamb. Bot.* 559. Hierochloa? latifolia, *Kunth Revis. Gram.* i. 21. Holcus latifolius, *Osbeck. Iter.* 247; *Linn. Syst. Ed.* x. 1305. Oplismenus? magellanicus, *Roem. & Sch. Syst.* ii. 485. Melica lappacea, *Rasp. in Ann. Sc. Nat. Ser.* I. v. (1825) 443. M. diandra & refracta, *Roxb. Fl. Ind.* i. 327. Poa latifolia, *Forst. f. Prodr.* 8; *Vahl Symb.* ii. 18. P. malabarica, *Linn. Sp. Pl.* 69; *Burm. Fl. Ind.* 27, t. 11, f. 2. P. nemoralis, *Heyne ex Wall. Cat.* n. 3826 A. Torresia? latifolia, *Beauv. l. c.* 165. T. biflora, *Roem. & Sch. Syst.* ii. 515. Uniola lappacea, *Trin. in Act. Petrop.* VI. i. (1831) 358, *Sp. Gram. Ic.* t. 298. Cenchrus lappaceus, *Linn. Sp. Pl. Ed.* II. 1488. Festuca latifolia, *Roth. Nov. Pl. Sp.* 75. F. blepharophora, *Roem. & Sch. Syst.* ii. 728. F. ciliaris, *Heyne ex Roem. & Sch. l. c.* F. ciliata, *Hb. Heyne ex Wall. Cat.* n. 3826 A. F. virgata, *Heyne ex Steud. Nom. Ed.* II. i. 633. Panicum festuciforme, *Hochst. Pl. Ind. Or. Hohenack.* n. 363.—Panicum, *Wall. Cat.* n. 8708.

TROPICAL SIKKIM HIMALAYA, the KHASIA HILLS, MUNNIPORE, BURMA, CENTRAL INDIA, and southward to MALACCA, the ANDAMAN ISLDS., and CEYLON.—DISTRIB. Malaya, China, Polynesia, Africa trop.

Stem 1–3 ft., stout, erect from a branched woody rootstock, with stout root-fibres. *Leaves* 4–10 by 1–1¼ in., many-nerved, glabrous or sparsely hairy, base narrow obtuse or subcordate, midrib oblique; sheath glabrous or hairy; ligule short, lacerate. *Panicle* 8–10 in. long and broad, branches smooth. *Spikelets* ⅙–¼ in., green; rachilla scaberulous; palea often decurrent on the rachilla below the gl.—The number of flg. gls. varies, but 5 is, I think, a normal; I and II are rather distant at the base. In one spikelet I find 6 gls., of which III was empty naked and epaleate, IV naked and paleate, V and VI with stout reversed tubercle-based spines; not unfrequently the fem. spikelet has only a single strongly-armed gl. and a produced rachilla. Kunth (l. c. Suppl. 302) describes gl. III and IV as complete and bisexual, V minute and imperfect. I suspect that this grass is polygamous.

112. **STREPTOGYNA**, *Beauv.*

A tall erect perennial grass. *Leaves* petioled, flat; nerves tessellate. *Spikelets* 1–4-fld., narrow, terete, subsessile, not jointed on the long, rigid, strict, unilateral spike; rachilla elongate and jointed between the fl. gls. *Glumes* 3–6, very narrow, I and II empty, persistent; I small, 3-nerved; II longer, convolute, acute, awnless, many-nerved; III longer, rigid, tightly convolute, many-nerved, acuminate and awned; IV–VI empty; palea embraced by the gl., narrow, 2-fid. *Lodicules* 3, subulate. *Stamens*

2–3. *Styles* filiform; stigmas 2–3, very long, at length spirally twisted. *Grain* linear, terete, free but closely embraced by the gl. and palea.

S. crinita, *Beauv. Agrostogr.* 80, t. 16, f. 8; *Poir. Encycl. Suppl.* t. 912; *Kunth Enum. Pl.* i. 427, *Suppl.* 349; *Doell in Mart. Fl. Bras.* ii. III. 171, t. 46; *Steud. Syn. Gram.* 339; *Griseb. Fl. Brit. W. Ind.* 528; *Thw. Enum. Pl. Zeyl.* 374; *Trim. Cat. Pl. Ceyl.* 110; *Wight Cat.* n. 2362. S. guianensis, *Rich. ex Roem. & Sch. Syst.* ii. 614. Streptia crinita & secunda, *Herb. Rich.*

TRAVANCORE; Courtallam, *Wight*, *Beddome*. CEYLON; Matele district, *Gardner*. DISTRIB. Africa and America trop.

Stem 4–6 ft., smooth. *Leaves* often as long as the stem, lanceolate, gradually narrowed to the base and apex, membranous; sheath long, open; ligule short. *Spikes* terminal, 8–16 in. long, with a spathiform basal sheath; rachis compressed, smooth, produced beyond the spikelets, with often an imperfect glume. *Spikelets* 1 in., quite smooth and glabrous; gls. subcoriaceous; I lanceolate, finely acuminate; III narrowed into the very slender awn, ½–¾ in. long. *Anthers* very long and narrow.

113. **ÆLUROPUS,** *Trin.* (*ex parte*).

Low much branched rigid leafy perennial grasses. *Leaves* distichous, usually spreading and convolute, rigid and pungent, rarely flat. *Spikelets* 6– many-fld., sessile or subsessile in oblong spiciform panicles or capitate, densely crowded, laterally compressed, villous, not jointed on their pedicels; rachilla jointed at the base and between the flg. gls. internodes very short. *Glumes* many, oblong, membranous, dorsally rounded, apiculate cuspidate or mucronate, I and II shorter than the flg. gls., I 1–3-nerved; II 5–7-nerved; fl. gls. closely imbricate, 7–9-nerved, longer than the empty gls.; palea as long and broad as its gl., broader upwards, truncate, keels ciliate. *Lodicules* 2, obliquely truncate. *Stamens* 3, anthers small. *Styles* free, stigmas plumose. *Grain* ovoid to oblong, free.—Species few, Reg. Mediter., Oriental and Indian.

Parlatore (Fl. Ital. i. 462) has, under *Æl. littoralis*, pointed out that two plants have been referred to *Æ. lævis*, Trin., namely, *Dactylis brevifolia*, Koen., and *D. littoralis*, Willd. The former of these is an Indian species, on which alone Trinius founded the genus, the latter being subsequently referred to it by Steudel (Nom. Ed. II. i. 30); but Parlatore was not aware of *D. brevifolia* being a species of *Eleusine*, and that therefore *Æluropus*, Trin., has no foundation. That this is so is evidenced both by Trinius's citation of Koenig's plant by name as his *lævis*, and by his figure of the fruit (Agrost. Fund. t. 12), which is conclusive. It would, however, appear from C. A. Meyer (Verz. Pfl. Cauc. 18 (1831) that Trinius may have included both *D. brevifolia* and *littoralis* under his *A. lævis*; for that author, quoting no doubt from the St. Petersburgh Herbarium, cites *lævis* and *villosus* as species of Trinius, giving (by error) *D. littoralis* as the authority for *lævis*, and *Poa repens*, Bieb., for *villosus*. Under these circumstances it appears to me that the best course to adopt, is to retain *Æluropus* as "Trin. ex parte," for *D. littoralis* and other plants described by later authors under that generic name. The alternatives are either to coin a new name for the latter, or to adopt for these *Calotheca*, Spreng. (Syst. i. 342 (1825), which is a mixture of several genera, including *Æluropi*, and which name is better avoided, inasmuch as there is an earlier *Calotheca* (Desv. 1810), likewise made up of several genera of grasses. It remains to say that the synonyms of *Eleusine brevifolia* (see p. 295), and of *Æluropus littoralis* and *villosus* are almost inextricably involved; and I am far from being satisfied with my attempt to disentangle the first and last of them.

Æ. villosus, *Trin. ex C. A. Mey. Verz. Pfl. Cauc.* 18; spikelets in short heads. *Aitchis. Cat. Panjab. Pl.* 169. *Æ.* arabicus, *Steud. Nom. Ed.* II. i. 30. *Æ.* brevifolius, *Wall. Cat.* n. 8897; *Wight Cat.* n. 1792 (*non Herb. Wight & excl. Syn.* Dactylis brevifolia, *Linn.*); *Duthie Grass. N.W. Ind.* 39. *Æ.* concinnus & siniacus, *Fig. et Notar. in Mem. Acad. Torin. Ser.* II. xii. (1852) 257. *Æ.* lagopodioides, *Trin. ex Thw. Enum. Pl. Zeyl.* 374. *Æ.* lagopoides, *Trin. ex Trim. Cat. Ceyl. Pl.* 110. *Æ.* littoralis, *var.* repens, *Coss. & Dur. Expl. Sc. Alger.* 155; *Boiss. Fl. Orient.* v. 594. *Æ.* mucronatus, *Aschers. in Schweinf. Beitr. Fl. Æthiop.* 297; *Boiss. l. c.* 595. *Æ.* niliacus, *Steud. Nom. Ed.* II. i. 30. *Æ.* niloticus, *Edgew. in Journ. Linn. Soc.* vi. (1862) 196. *Æ.* pubescens, *Trin. ex Steud. l. c. in part?* *Æ.* pungens, *C Koch. in Linnæa,* xxi. (1848) 408. *Æ.* repens, *Parl. Fl. Ital.* i. 462; *Edgew. l. c.* Dactylis lagopodioides, *Dalz. & Gibs. Bomb. Fl.* 298 (*excl. Syn.*). D. lagopoides, *Linn. Mant.* 33; *Burm. Fl. Ind.* 28, t. 12, f. 2 (*the right hand portion*), *Roxb. Fl. Ind.* i. 340; *Grah. Cat. Bomb. Pl.* 236 (*excl. Syn*). D. massaviensis, *Steud. Syn. Gram.* 298. D. repens, *Desf. Fl. Atlant.* i. 79, t. 15. Poa lagopodioides, *Kunth Revis. Gram.* i. 111, *Enum.* i. 325. P. massavensis, *Fresen. in Mus. Senkenb.* ii. (1837) 143. P. repens, *Bieb. Fl. Taur. Cauc.* iii. 69. P. tunetana, *Spreng. Pugill.* ii. 20. Calotheca arabica, niliaca & repens, *Spreng. Syst. Veg.* i. 347, 348. *Duthie l. c.* (*err. typ.* miliacea). Kœleria lagopodioides, *Panz. in Denkschr. Acad. Muench.* K. brevifolia, *Herb. Wight ex Wall. Cat.* n. 8897 C. Sesleria lagopodioides, *Spreng. Pugill.* ii. 22. Festuca mucronata, *Forsk. Fl. Ægypt. Arab.* 22. F. pungens, *Vahl Symb.* i. 10, t. 2. Uralepis? pungens, *Kunth Revis. Gram.* i. 108, *Enum.* i. 319.

Sandy shores of the DECCAN PENINSULA and CEYLON. Salt plains of the PANJAB and SCIND.—DISTRIB. Reg. Mediterr., Arabia, Persia, Affghan., Reg. Casp.

A rigid perennial herb, with long wiry roots. *Stems* 6–12 in., densely tufted, branched, hard, smooth, erect, or prostrate with long often creeping stolons, base slightly swollen, clothed with rigid glabrous or hairy sheathing scales, above clothed with leaves, and terminating in a naked glabrous or pubescent slender peduncle 1–4 in. long. *Leaves* $\frac{1}{6}$–1 in., erect or spreading and recurved, subulate-lanceolate or acicular, coriaceous, pungent, convolute, rarely flat, striated with close-set nerves, base rounded, glabrous or sparsely hairy, midrib obscure, margins smooth or scaberulous; sheaths short, terete, inflated or dilated, glabrous or ciliate; ligule a ridge of short hairs. *Heads* $\frac{1}{4}$–$\frac{2}{3}$ in. diam., globose ovoid or oblong. *Spikelets* $\frac{1}{15}$–$\frac{1}{10}$ in., 4– many-fld., crowded, sessile, villous with soft hairs, pale green or white; gls. closely imbricate, ovate-oblong, apiculate, concave, margins hyaline, nerves strong; I 3–5-nerved; II longer, 7–9-nerved; flg. gls. rather longer than the empty, many-nerved, lower 2–4 sometimes neuter; palea broadly truncate or 3-lobed, keels villous. *Ovary* obovoid. *Grain* $\frac{1}{40}$ in., obovate-oblong, compressed dorsally.—A very variable grass in habit, foliage and size of the heads and spikelets. Regarded by Cosson and others as a form of *Æ. littoralis,* in which the panicle is elongate.

114. DACTYLIS, *Linn.*

Stiff erect tufted perennial grasses. *Leaves* flat. *Spikelets* 3–10-fld. compressed, subdistichously crowded in short unilateral spikes forming a terminal unilateral panicle, not jointed at the base; rachilla continuous, glabrous. *Glumes* I and II unequal, scarious, lanceolate, acuminate or mucronate, keeled, empty, persistent; I 1-nerved, II 1–3-nerved; flg. gls. rather longer, rigid, 5-nerved, subaristate, keel scabrid; palea 2-fid, keels ciliolate. *Lodicules* 2, 2-lobed, fleshy. *Stamens* 3, anthers long. *Styles* free, terminal, stigmas plumose. *Grain* oblong, acute, trigonous, dorsally subcompressed, ventrally channelled, glabrous.—Species few, Europe temp. Asia and Africa.

D. glomerata, *Linn. Sp. Pl.* 86; leaves keeled, sheaths compressed, ligule long laciniate, panicle erect or inclined, branches short or the lower long erecto-patent naked below, spikelets 3–5-fld., keels of flg. gls. ciliate-scabrid. *Beauv. Agrost.* 85, t. 17, f. 5; *Fl. Dan.* t. 743; *Host Gram. Austr.* ii. 67, t. 94; *Kunth Enum. Pl.* i. 386, *Suppl.* 320, t. 29, f. 1; *Engl. Bot.* t. 335; *Knapp Gram. Britt.* t. 62; *Reichb. Ic. Fl. Germ.* t. 59 (*excl.* f. 1520); *T. Nees Gen. Fl. Germ. Monocot.* i. n. 65; *Webb. Phytog. Canar.* t. 249; *Wall. Cat.* n. 8899; *Duthie Grass. N.W. Ind.* 39; *Ledeb. Fl. Ross.* iv. 355; *Boiss. Fl. Orient.* v. 596. Festuca glomerata, *All. Fl. Pedem.* ii. 252.

NORTH-WESTERN HIMALAYA from Kashmir to Kumaon, and WESTERN TIBET, alt. 8–10,000 ft.—DISTRIB. Europe, N. Africa, W. and N. Asia (an alien elsewhere).

Stem 2–3 ft. from a short creeping stock, smooth. *Leaves* subglaucous, glabrous or hairy towards the base, margins scabrid; sheath much flattened or 2-edged. *Panicle* 1–6 in., strict, green or purplish; lower branches sometimes 2–3 in. long. *Spikelets* ⅙–¼ in., ovate; gls. I and II pale with green nerves, subaristately acuminate, terminal flg. gl. sterile.—There are many synonyms of this common variable European plant, but the whole genus must be studied before the species can be disentangled.

115. **SCLEROCHLOA,** *Beauv.*

A small annual prostrate grass. *Spikelets* minute, 3–6-fld., compressed, biseriately crowded on the branches of a secund subspiciform panicle; rachilla thickened under the flg. gls. *Glumes* 5–8; I and II very unequal, membranous, concave, emarginate, empty, persistent, I 3-nerved; II 5–8-nerved, unequal-sided; fl. gls. larger, complicate, keeled, strongly 5-nerved, tip obtuse, margins hyaline; palea hyaline, 2-fid, keels spinulosely ciliate. *Lodicules* 2, hyaline, ovate, 2–4-toothed. *Stamens* 3. *Styles* short, free, stigmas plumose. *Grain* oblong, free, subconcavo-convex, glabrous, tip 2-fid.

S. dura, *Beauv. Agrost.* 98, t. 14, f. 4; *Reichb. Ic. Fl. Germ.* t. 58; *Ledeb. Fl. Ross.* iv. 367; *Boiss. Fl. Orient.* v. 635; *Griseb. in Goett. Nachr.* (1863) 293. Poa dura, *Scop. Fl. Carn.* i. 70; *Host Gram. Austr.* ii. 53, t. 73. Sesleria dura, *Kunth Revis. Gram.* i. 110, *Enum. Pl.* i. 323, *Suppl.* 278. Cynosurus durus, *Linn. Sp. Pl.* 72; *Pollich Hist. Palat.* i. 98, *Fig.* 1. Eleusine dura, *Lamk. Illust.* i. 203. Festuca dura, *Vill. Hist. Pl. Dauph.* ii. 94. Amblychloa dura, *Link in Linnæa*, xvii. (1843) 399.

Kashmir Valley, alt. 5000 ft., *Thomson.*—DISTRIB. Europe, N. Asia.

Stems 4–6 in., tufted, compressed, leafy throughout. *Leaves* linear, acute; sheath open; ligule oblong. *Panicle* 1–2 in., ovate-oblong, rigid, green; pedicels very short, stout, trigonous. *Spikelets* ¼–⅓ in., spreading or appressed to the rachis; gl. I ovate-oblong, obtuse, keeled, margins hyaline; II twice as long; flg. gls. ovate-oblong, herbaceous, compressed above; palea shorter, oblong.

116. **SCHISMUS,** *Beauv.*

Small annual grasses. *Leaves* narrow. *Spikelets* many-fld., in a subspiciform panicle, with very short erect branches and pedicels, not jointed at the base; rachilla elongate, jointed at the base and between the flg. gls. *Glumes* 6–10; I and II large, empty, subequal, lanceolate, acute, concave, persistent, herbaceous, margins scarious, I broadest, 5–7-nerved; II 3-nerved; flg. gls. much shorter, oblong or obovate, 2-fid, many-nerved, mucronate or not between the hyaline lobes; palea spathulate with 2 submarginal diverging basal nerves. *Lodicules* 2, hyaline, truncate. *Stamens* 3, anthers minute. *Styles* terminal, long, stigmas plumose. *Grain* minute, broadly obovoid, compressed, free.—Species 2 or 3, Europ. Asia, N. Africa.

S. marginatus, *Beauv. Agrost.* 74, t. 15, f. 4; *Kunth Enum. Pl.* i. 385, *Suppl.* 318, t. 28, f. 2; *Ledeb. Fl. Ross.* iv. 403; *Duthie Grass. N.W. Ind.* 39. S. calycinus, *C. Koch in Linnæa* xxi. (1848) 397; *Coss. & Dur. Expl. Sc. Alger.* 138, in *Bull. Soc. Bot. Fr.* iv. (1857) 399; *Boiss. Fl. Orient.* v. 599. S. hirsutus, *Trin. Fund. Agrost.* 148. Festuca calycina, *Loefl. It. Hispan.* 116; *Cav. Ic.* i. 88, t. 44, f. 2; *Lamk. Illustr.* t. 46, f. 5. Koeleria calycina, *DC. & Duby. Bot. Gall. Suppl.* 271. Hemisacris gonatodes, *Steud. in Flora,* xii. (1829) 490. Electra calycina & nitida, *Panz. in Muench. Denkschr.* iv. (1813) 299 *cum Ic.* Trisetum Loeflingianum, *Duthie Grass. N.W. Ind.* 31 (*non Beauv.*).—*Griff. Notul.* 96 (gramen pusillum, &c.), *Ic. Pl. Asiat.* t. 154, f. ii.

UPPER PUNJAB; Peshawur, *Stewart.* WESTERN TIBET, alt. 9–11,000 ft., Nubra and Dras, *Thomson,* Iskardo, *Clarke.*—DISTRIB. Westwd. to the N. Atlantic, N. Asia.

Stems 2–8 in., densely tufted, filiform. *Leaves* glabrous or sparsely hairy, $\frac{1}{10}$ in. broad; ligule of hairs. *Panicle* 1½–2 in., green, glistening, pedicels scabrid. *Spikelets* ¼ in.; gl. I and II glabrous; flg. gls. hairy, cleft to about ¼ of their length; lobes ovate, acute.

117. **BRIZA,** *Linn.*

Annual or perennial erect grasses. *Leaves* flat or convolute. *Spikelets* many-fld., laterally compressed, pendulous, in lax rarely contracted or spiciform panicles not jointed on the pedicel; rachilla jointed at the base. *Glumes* many, scarious, cymbiform or saccate, closely imbricate; I and II subequal, empty, 3–5-nerved, persistent; fl. gls. broader, obtuse acute or shortly awned, 5- or more-nerved, terminal often empty or imperfect; palea often small, broad, flat, hyaline, 2-nerved. *Lodicules* 2, ovate-lanceolate. *Stamens* 3. *Styles* free. *Grain* ovoid, dorsally compressed, closely invested by the palea.—Species about 10, of temperate regions.

B. maxima, Linn., has been found as an escape in several parts of India. It may be recognized by the very large spikelets. *B. minor,* L., with very small spikelets may be also expected to occur.

B. media, *Linn. Sp. Pl.* 70; perennial, panicle erect, branches spreading, spikelets ovate 5–9-fld., gl. I and II shorter than III. *Fl. Dan.* t. 258; *Host Gram. Austr.* ii. t. 29; *Knapp. Gram. Britt.* t. 60; *Engl. Bot.* t. 340; *Trin. Sp. Gram. Ic.* t. 291; *Reichb. Ic. Fl. Germ.* i. t. 92; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 59; *Kunth Enum. Pl.* i. 371, *Suppl.* 307, t. 25, f. 2; *Ledeb. Fl. Ross.* iv. 365; *Boiss. Fl. Orient.* v. 592; *Duthie Grass. N.W. Ind.* 39.

WESTERN HIMALAYA; from Kashmir to Garwhal, and WESTERN TIBET, alt. 9–13,000 ft. SIKKIM, at Gnatong, *Cummins.*—DISTRIB. Europe, N. Asia. (An alien elsewhere.)

Stem 1–3 ft., very slender, creeping below and stoloniferous. *Leaves* flat, smooth or scaberulous; sheaths smooth, upper inflated; ligule short. *Panicle* pyramidal; branches long, capillary, horizontal. *Spikelets* $\frac{1}{4}$–$\frac{1}{3}$ in., green or purplish, shining, orbicular-ovate; fl. gls. cordate, imbricate.

118. **POA,** *Linn.* (by O. Stapf).

Annual or perennial grasses. *Leaves* flat or convolute. *Spikelets* 2–6-fld., in lax or close rarely spiciform panicles, laterally compressed; rachilla jointed at the base and between the flg. gls., glabrous or sparsely hairy, upper fl. usually imperfect. *Glumes* 4 or more, acute or obtuse, usually thinly herbaceous; I and II empty, persistent, 1–3-nerved, keeled; flg. gls. obtuse or acute, 5–7- very rarely 3-nerved, nerves conniving towards the top, callus often bearded with long wool; palea shorter than the gls., 2-keeled. *Lodicules* 2. *Stamens* 3. *Styles* short, free, stigmas plumose. *Grain* ovoid oblong or linear, free or adherent to the palea. —Species about 80, temperate and cold regions, rarely tropical.

The Indian *Poae* have been worked up by Dr. Stapf, who has kindly given me his mss., from which the characters given below are taken. The nomenclature agrees closely with that of Hackel in a very extensive series of North Indian grasses collected by Mr. Duthie. The names of early distributed collections including those of Dr. Thomson and myself were given by Genl. Munro after a cursory examination, and should be disregarded.

Subgen. I. PSEUDOPOA, *C. Koch.* *Fl. gls.* 3-nerved, often very faintly.

1. **P. persica,** *Trin. in Mem. Acad. Sc. Petersb. Ser.* VI. i. (1831) 373; *Kunth Enum. Pl.* i. 358; *Boiss. Fl. Orient.* v. 610; *Steud. Syn. Gram.* 255. P. parvula, *Herb. Un. Itin. ex Steud. l. c.* P. pamphylica, *Boiss. Diagn. Ser.* I. xiii. 58. Nephelochloa persica, *Griseb. in Ledeb. Fl. Ross.* iv. 366, *in Goett. Nachr.* (1868) 74. Festuca persica, heptantha, & polygama, *C. Koch in Linnæa,* xxi. (1848) 409, 410. F. Amherstiana, *Royle Ill. Himal. Bot.* 417 (*name only*).—Poa, n. 19, 20, *Herb. Ind. Or. H. f. & T.*

WESTERN HIMALAYA; from Kunawur to Kashmir and WESTERN TIBET, alt. 7–12,000 ft.—DISTRIB. Westwd. to Asia Minor, Soongaria, Altai Mts.

A very slender erect, quite glabrous, usually flaccid annual, 1–18 in. high, most variable in habit; from a simple capillary stem with few-fld. contracted panicle, to a tall strict herb, with a pyramidal or oblong copiously branched panicle 6–8 inches long, and sometimes 6 in. across the spreading branches. *Leaves* narrowly linear, rarely $\frac{1}{6}$ in. diam., quite smooth, flat; ligule lanceolate. *Panicle-branches* 2–9 in a whorl, pedicels capillary, often very long and divaricate. *Spikelets* $\frac{1}{10}$-$\frac{1}{6}$ in. long, 2–15-fld., green, rachilla slender; gls. I and II lanceolate, acuminate, I very small, II 3-nerved; flg. gls. longer than II, linear-oblong, acute acuminate or obtuse and mucronate, smooth or obscurely puberulous, tip and margins more or less broadly scarious and shining; palea 2-toothed, keels scaberulous. *Lodicules* ovate-oblong. *Anthers* minute. *Grain* narrow, linear, subadherent.

The following are divergent forms with many intermediates of this extremely variable grass. In India they do not seem to affect special localities. All seem to occur in Western Tibet, where the plant is very abundant.

P. PERSICA *proper*; rather tall, spikelets many-fld., fl. gls. acute or acuminate very narrowly scarious.

Var. *soongarica*; spikelets 1–3-fld., flg. gls. acuminate, margins broadly scarious. var. oxymeris, *Boiss. Fl. Orient. l. c.* P. soongarica, *Boiss. l. c.* 611. P. paradoxa & P. subtilis, *Kar. & Kir. in Bull. Soc. Nat. Misc.* (1841) 464, (1842) 532. P. diaphana (error for *diaphora*), *Trin. in Bull. Sc. Acad. Petersb.* i. (1836) 69.

Nephelochloa altaica & soongarica, *Griseb. in Ledeb. Fl. Ross.* iv. 367. Glyceria soongarica, *Schrenk in Fisch. & Mey. Enum. Pl. Schrenk.* i. 1. Aira altaica, *Trin. in Bunge Verz. Suppl. Fl. Altaic.* 8.

Var. *alpina*, Boiss. l. c. 610; 1–2 in. high, fastigiately branched, panicle depressed amongst the leaves, rachis short, branches crowded spreading subsquarosely and decurved, spikelets 2–3-fld. fl. gl. acute. *Var.* minor, *Boiss. in Bourg. Pl. Lycia* (1860).

Var. *major*, Boiss. l. c.; tall, panicle spreading, spikelets few or many-fld., flg. gls. truncate or rounded at the tip mucronate, margins very narrowly scarious. Nephelochloa tripolitana, *Boiss. & Blanch. Diagn. Ser.* II. iv. 133.

Subgen. II. EUPOA. *Flg. gls.* 5-nerved, lateral pairs sometimes obscure.

* Stem bulbously thickened at the base.—§ Arenariæ.

2. **P. bulbosa,** *Linn. Sp. Pl.* 70, *var.* elanata, *Stapf*; densely tufted, leaves linear acute flat, ligule ovate or oblong, panicle oblong, lower branches binate, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. 4–7-fld. subsessile crowded often viviparous, gl. I ovate acute margin broadly hyaline, flg. gls. oblong acute, upper $\frac{1}{4}$–$\frac{1}{3}$ hyaline silkily hairy below the middle, nerves obscure, wool 0 or very scanty, keels of palea scabrid. P. bulbosa, *Duthie Grass. N.W. Ind.* 40; *Griseb. in Goett. Nachr.* (1868) 74.

WESTERN HIMALAYA; from Kashmir to Zanskar, alt. 5–9000 ft., *Falconer*, &c. WESTERN TIBET, alt. 9–13,000 ft.—DISTRIB. (of *P. bulbosa*) temp. Europe and Asia.

Stems 6–16 in., terete, smooth. *Leaves* chiefly subradical, margins smooth, shortly acute, lower 2–2$\frac{3}{4}$ in., upper much shorter, $\frac{1}{6}$ in. broad, of the surculi very narrow; sheaths lax, often open, upper more appressed shorter than the internodes; ligule $\frac{1}{8}$–$\frac{1}{6}$ in., or shorter in reduced forms. *Panicle* 1–2 in., rarely ovate, lobed, contracted, lower branches nearly smooth; branchlets short, scaberulous. *Spikelets* shortly pedicelled or subsessile, oblong or ovate-oblong, pale green; gl. I $\frac{1}{12}$–$\frac{1}{8}$ in., ovate, acute, 3- rarely 2-nerved, margins denticulate, nerves rough; II similar but larger, more acuminate, 3-nerved; fl. gls. $\frac{1}{8}$–$\frac{1}{7}$ in., oblong, acute, sometimes mucronulate, upper $\frac{1}{4}$-$\frac{1}{3}$ hyaline; nerves obscure; palea $\frac{1}{5}$ shorter. *Anthers* $\frac{1}{18}$–$\frac{1}{12}$ in.—Differs from typical *bulbosa* in the absence or scantiness of wool in the spikelets. Kashmir specimens are unusually tall and stout, with many broad leaves and sometimes a laxer habit. Zanskar ones are typical in all respects but the absence of wool. The viviparous state is very common.

** Stem not bulbously thickened at the base.

† Spikelets broadly ovate; gls. thin, broad, dorsally strongly arched, fl. gl. base silkily hairy, wool 0.—§ Alpinæ.

3. **P. alpina,** *Linn. Sp. Pl.* 67; densely tufted, surculi clothed with short distichous thickish sheaths, leaves short broadly linear firm acute, panicle broadly ovate, lower branches mostly binate, spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. 3–6-fld. broadly ovate, gls. all thin arched, I ovate acute margin broadly hyaline, flg. gls. ovate-oblong obtuse upper $\frac{1}{3}$ hyaline silky-hairy below the middle nerves obscure, wool 0, keels of palea ciliate below the middle. *Host Gram. Austr.* ii. 49, t. 67; *Engl. Bot.* t. 1003; *Knapp Gram. Britt.* t. 50; *Reichb. Ic. Fl. Germ.* t. 83; *Ledeb. Fl. Ross.* iv. 370; *Boiss. Fl. Orient.* v. 605; *Griseb. in Goett. Nachr.* (1868) 74; *Duthie Grass. N.W. Ind.* 40.

WESTERN HIMALAYA and WESTERN TIBET; from Kashmir to Garwhal, alt. 10–16,000 ft.—DISTRIB. N. temp. and Arctic regions.

Stem 4–16 in., terete, smooth. *Leaves* chiefly crowded at the base of the stem; rarely more than $\frac{1}{8}$ in. broad, flat or of the surculi plicate, firm, margins rough; lowest sheaths and of the surculi distichous, the thickened bases enclosing the stem, upper much longer, up to 2–4 in., smooth, open or not, uppermost remote from the panicle; ligule of the lower and of the surculi very short, truncate, ciliolate, of the upper longer, ovate, sparingly coarsely denticulate. *Panicle* up to 2$\frac{1}{2}$ by 2 in., lax or dense, lower branches more or less spreading, usually naked in the lower half; branchlets short, scaberulous. *Spikelets* crowded, usually parti-coloured, the lower shortly upper longer-pedicelled; gls. thin, I $\frac{1}{7}$ in., 3-nerved, lateral nerves faint or one obsolete, margins subentire, keel rough; II similar, but rather broader; fl. gls $\frac{1}{8}$–$\frac{1}{7}$ in., often emarginate; palea hardly shorter, keels ciliate below the middle, serrulate above it. *Anthers* $\frac{1}{16}$ in., oblong.

†† Spikelets narrower, gls. all or flg. especially firmer, I and II lanceolate or oblong-lanceolate.

a. Gls. all firm; I & II acute or subacuminate, I 1- or sub 3-nerved; anthers $\frac{1}{18}$–$\frac{1}{12}$ *in.—Rather tall robust or subrobust species, stoloniferous when flg.; stems smooth.*—§ Pratenses.

4. **P. tibetica,** *Munro ex Duthie Grass. N.W. Ind.* 41; tall, stout, stoloniferous, leaves linear acute firm, ligule short truncate, panicle contracted or spiciform, lower branches 2–4-nate unequal smooth, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. 4–6-fld. pedicelled crowded pale, gl. I ovate-lanceolate margin hardly hyaline, II ciliate on the margins towards the base, fl. gls. oblong, tips only hyaline, keel alone silkily hairy, lateral nerves obscure, wool 0.

WESTERN TIBET, alt. 9–16,000 ft.; Piti, *Jacquemont*; saline plains of Ladak, &c., *Thomson*. PLAINS OF TIBET N. of Kumaon, alt. 15,000 ft., *Strachey & Winterbottom* (Poa, n. 1.)

Stem 12–20 in., stout, terete, smooth, closely sheathed below, 1–2-leaved much below the panicle. *Leaves*, lower 8 in., upper 2–3 by $\frac{1}{8}$–$\frac{1}{5}$ usually plicate, glabrous, smooth; sheaths firm, upper very long, smooth; ligule $\frac{1}{12}$ in., firm, ciliolate. *Panicle* about 1$\frac{1}{4}$ in. long, narrow, interrupted; lower branches 2-nate, the longer appressed to the rachis, and branchlets smooth. *Spikelets* crowded, all pedicelled, oblong, pale; gls. firm, I $\frac{1}{8}$–$\frac{1}{7}$ in., subacuminate, sub 3-nerved, keel minutely scaberulous, margins hardly hyaline; II rather larger, more oblong; fl. gls. $\frac{1}{7}$–$\frac{1}{6}$ in., subacute, ciliate on the margin towards the base, lateral nerves obscure; palea rather shorter, keels subserrulate. *Anthers* $\frac{1}{10}$ in., linear.

Var. *aristulata*, Stapf; gls. more acuminate often very shortly aristulate.—Eastern Tibet, N. of Sikkim, alt. 16–17,000 ft.—*J. D. H.*

5. **P. pratensis,** *Linn. Sp. Pl.* 67; tall, stout, stoloniferous, leaves usually flat acute upper much the shortest, ligule truncate or subobovate, panicle ovate or oblong lower branches usually 5-nate, spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. 3–5-fld. ovate acute crowded green, gl. I ovate-lanceolate acute, flg. gls. oblong upper $\frac{1}{5}$–$\frac{1}{6}$ hyaline nerves prominent, keel and lateral nerves silkily hairy to the middle or above it, wool copious, keels of palea scabrid-serrate.—*Host Gram. Austr.* ii. 44, t. 61; *Engl. Bot.* t. 1073; *Knapp Gram. Britt.* t. 55; *Kunth Enum. Pl.* i. 352, *Suppl.* 297; *Steud. Syn. Gram.* 251; *Reichb. Ic. Fl. Germ.* t. 88; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 56; *Ledeb. Fl. Ross.* iv. 378; *Boiss. Fl. Orient.* v. 601; *Griseb. in Goett. Nachr.* (1868) 74; *Duthie Grass. N.W. Ind.* 40. P. alpina, *Griseb. l. c.* (*Herb. Schlagintw.* n. 2772.)

WESTERN HIMALAYA; from Kashmir to Kumaon, and WESTERN TIBET, alt. 5-15,000 ft. BHOTAN, *Griffith*.—DISTRIB. North temp. regions.

Stems 6–20 in., smooth, terete. *Leaves* crowded at the base of the stem, linear, rarely plicate or subinvolute, firm (flaccid in shade), margins asperulous, glabrous or rarely sparsely hairy, lower very variable in length, upper $\frac{1}{3}$–1 in. by $\frac{1}{20}$–$\frac{1}{6}$ in.; lowest sheaths firm, close; upper much longer, 4 in. and upwards, smooth; ligule rarely more than $\frac{1}{12}$ in. *Panicle* up to $4\frac{1}{2}$ in., lax or contracted; lower branches rarely 2–3-nate, erect or spreading, naked below or rarely branched to the base, smooth or asperulous. *Spikelets* shortly or terminal longer-pedicelled, green; gl. I $\frac{1}{12}$–$\frac{1}{10}$ in., 3- or 2–1-nerved, keel asperulous, margins hyaline denticulate; II rather larger, 3-nerved; gls. $\frac{1}{8}$–$\frac{1}{7}$ in., acute, nerves prominent; palea shorter. *Anthers* $\frac{1}{15}$–$\frac{1}{12}$ in. linear.—There are many forms, characterized by narrow almost setaceous or by very short leaves, by very narrow and contracted panicles, by shorter spikelets, or by various combinations of these characters; but these are all so intricately connected, and in many cases so evidently the product of conditions of habitat, and are so independent of geographical distribution, that it is impossible to define them satisfactorily. The two extreme forms are—

Var. *angustifolia*, Sm. Fl. Britt. i. 105; Gaud. Agrost. Helvet. i. 214; leaves extremely narrow often setaceous. P. angustifolia, *Linn. Sp. Pl.* 67. P. strigosa, *Hoffm.* & setacea, *Hoffm.* P. compressa & trivialis (*in part*) *Herb. Ind. Or. Hf. & T.* —Occurs with the type and passes directly into it.

Var. *alpigena*, Blytt Norg. Flora, 130; stem 3–8 in., leaves short plicate, ligule $\frac{1}{25}$–$\frac{1}{8}$ in., panicle $\frac{3}{4}$–$1\frac{1}{2}$ in. ovate, lowest branches solitary or 2–5-nate glabrous more or less flexuous spreading sometimes deflexed, branches sparingly asperulous or glabrous, spikelets 3–2-fld. variegated. P. bulbosa, *Herb. Strach. & Winterb.* n. 4. P. variegata, *Jacquem. mss.* P. alpina, *Herb. Ind. Or. Hf. & T.* (*in part*).—Western Tibet, alt. 13-17,700 ft., Topidhunga in Kumaon, alt. 14,500 ft., *Strach. & Winterb.*—A very distinct variety, with the habit of *P. alpina*, and confounded with it in various collections.

6. **P. pseudo-pratensis,** *Hook. f.*; stem tall stoloniferous, leaves acute or acuminate usually plicate lowest usually shortest, ligule ovate acute or truncate, panicle ovate or oblong lax-fld. lower branches usually binate branches very long flexuous scaberulous, spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. 3–2-fld., gl. I ovate-oblong acute margin hardly hyaline, flg. gls. oblong tips alone hyaline base silkily hairy nerves prominent, wool scanty or 0, keels of palea ciliate below.—Festuca, *Wall. Cat.* n. 3798 (*partly*). P. pratensis & P. flexuosa? *Herb. Ind. Or. Hf. & T.* (*in part.*)

CENTRAL & EASTERN HIMALAYA; Nepal, *Wallich*; Sikkim and W. Bhotan, alt. 10–12,000 ft., J. D. H., *Cummins.*

Stems 8–20 in., smooth, terete. *Leaves* crowded at the base of the stem, 1–$3\frac{1}{2}$ by $\frac{1}{8}$ in., lowest shorter, cauline far distant, of the surculi longer, linear, gradually narrowed into the sheath, glabrous smooth or minutely scaberulous; lowest sheaths short, firm, scarious, loose, upper much longer up to 6 in., membranous, smooth; ligule $\frac{1}{15}$ in. *Panicle* up to 8 in., branches 3–5-nate, about 2–3 in. long, naked except towards the ends, all spreading or suberect, flexuous, smooth or asperulous, branchlets rough. *Spikelets* $\frac{1}{4}$–$\frac{1}{3}$ in., blueish, crowded, shortly or the terminal longer-pedicelled, ovate-oblong; rachilla pilose; gls. firm, I $\frac{1}{7}$ in., 1-nerved, with rarely a lateral pair, keel roughish, margins minutely denticulate; II rather larger, more acuminate; fl. gls. $\frac{1}{6}$–$\frac{1}{5}$ in., oblong, acute, tip spotted with yellow, keel and outer nerves silky beyond the middle, intermediate at the base only; palea rather shorter, ciliate below, and scabridly serrulate above or in the whole length. *Anthers* $\frac{1}{15}$–$\frac{1}{12}$ in., linear.

β. Glumes all, or the flg. especially somewhat firm, I & II acuminate, I always distinctly 3-nerved; anthers $\frac{1}{25}$–$\frac{1}{12}$ in.—Low or more often tall slender species, stems when flowering surrounded by buds or short stolons, or fascicled with longer stolons.—§ Nemorales.

7. **P. attenuata,** *Trin. in Bunge Verz. Suppl. Fl. Alt.* 9; stems tufted erect rigid 1–2-leaved above, leaves narrowly linear plicate or involute, sheaths white scarious, ligule ovate, panicle contracted dense-fld., lower branches solitary or 2-nate short appressed scaberulous branching from

the base, spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. 2–5-fld. subsessile, gl. I ovate-lanceolate acuminate margins narrowly hyaline, flg. gls. sparsely hairy below, wool 0 or scanty. *Ledeb. Fl. Ross.* iv. 371; *Boiss. Fl. Orient.* v. 608. P. attenuata & P. altaica, *Griseb. in Goett. Nachr.* (1868) 74. P. laxa, *Duthie Grass. N.W. Ind.* 40. P. laxa & trivialis *partim Herb. Ind. Or. Hf. & T.* P. flexuosa γ. humilis, *Herb. Royle.* P. sterilis, *Bieb. ex Duthie l. c.*

Alpine Himalaya & Western Tibet, alt. 13–17,000 ft.—Distrib. Persia, Turkestan, N. Asia.

Stems 4–6 in., densely tufted, not stoloniferous, bearing axillary surculi. *Leaves* 1–2 by $\frac{1}{15}$ in., firm, smooth or nearly so; lower sheaths mostly scarious, white, upper up to 2 in.; ligule $\frac{1}{12}$–$\frac{1}{7}$ in., acute. *Panicle* $\frac{3}{4}$–$1\frac{1}{2}$ in., strict, continuous or sub-interrupted, lower branches rarely 3-nate, $\frac{1}{2}$–$\frac{3}{4}$ in., erect, often stout. *Spikelets* green, often variegated; gls. close together, firm, I hardly $\frac{1}{8}$ in. 3-nerved, keel nearly smooth or roughish; II rather longer, broader in the middle; flg. gls. $\frac{1}{8}$ in., oblong, upper $\frac{1}{6}$ hyaline, minutely scaberulous, tip usually erose; nerves 5, slender, obscure, keel and outer nerves silky at the very base only or subglabrous, rarely with longer hairs; palea rather shorter, keels serrulately scabrid. *Anthers* $\frac{1}{16}$ in.—Grisebach's *P. altaica* (Goett. Nachr. l. c.) is a stunted depauperate form.

8. **P. nemoralis,** *Linn. Sp. Pl.* 69; stem not stoloniferous when flg., but bearing at the base surculi or leaf-buds 2–4-leaved above the base smooth or scaberulous, leaves very narrowly linear, ligule very short ovate or longer and oblong, panicle contracted or open, lower branches usually binate usually branching to the base and branches scaberulous, spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. long-pedicelled 2–4-fld., gls. crowded I ovate-lanceolate acuminate margins hyaline, flg. gls. oblong upper $\frac{1}{4}$ or $\frac{1}{3}$ hyaline nerves obscure and keel at the base silky-hairy, wool 0 or scanty, keels of palea scaberulous. *Fl. Dan.* t. 709; *Engl. Bot.* t. 1265; *Host Gram. Austr.* ii. 5, t. 71; *Reichb. Ic. Fl. Germ.* t. 86; *Steud. Syn. Gram.* 251; *Ledeb. Fl. Ross.* iv. 375; *Boiss. Fl. Orient.* v. 607; *Duthie Grass. N.W. Ind.* 40.

Temperate & Alpine Himalaya & Western Tibet, alt. 5-15,500 ft.—Distrib. Europe, N. Asia, N. Am.

Stem 1–2 ft., erect, rigid or flaccid, smooth or scaberulous above, lower internodes hidden in the sheaths or nearly so, uppermost more or less exserted. *Leaves* cauline 2–5 by $\frac{1}{12}$ in., flat plicate or involute, firm or flaccid, erect or spreading, smooth or minutely scaberulous above; sheaths appressed, uppermost up to 4 in.; ligule truncate, up to $\frac{1}{8}$ in., often erosely denticulate. *Panicle* lax, rigid flexuous or flaccid, lowest branches solitary to 3-nate, slender, erect or spreading, asperulous. *Spikelets* loosely disposed, green or variegated; rachilla smooth scaberulous or pilose; gls. close or rather distant, firm or rather thin, I $\frac{1}{8}$–$\frac{1}{6}$ in., 3-nerved, keel roughish, margins narrowly or broadly hyaline; II rather longer and broader; flg. gls. $\frac{1}{8}$ in., subobtuse (or subacute in profile) upper $\frac{1}{6}$–$\frac{1}{4}$ hyaline and sometimes erose, nerves 5, slender, interspaces sometimes puberulous; palea rather shorter. *Anthers* $\frac{1}{16}$–$\frac{1}{10}$ in.—An extremely variable species in habit and length of ligule especially, which is usually short in European examples. The form with a long ligule forms a link with *P. attenuata*, Trin., which has usually a more contracted habit. Most of the described varieties of *nemoralis* are also Indian.

Var. *Linnæi*, Stapf; ligule very short about $\frac{1}{16}$ in. long.—From Kashmir to Kumaon, alt. 5–9000 ft., rarely higher.

Var. *ligulata*, Stapf; ligule elongate $\frac{1}{15}$–$\frac{1}{8}$ in. P. attenuata, *Griseb. in Goett. Nachr.* (1868) 75. (*Schlagintw.* n. 2791) & P. botryoides (*Schlag.* 7068, 7196). P. flexuosa, *Herb. Royle, & Strach. & Winterb.* n. 7. P. laxa, *Herb. Ind. Or. Hf. & T.* (*the Sikkim plant*). P. serotina, var. botryoides, *Griseb. l. c.* (*Herb. Schlag.* n. 7562). P. variegata, *Jacquem. mss.* (*partim*).—From Kashmir to Sikkim, alt. 7–15,000 ft.

γ. Glumes all thin, I & II acute or subacute, I 1-nerved or with a very slender 2nd ; anthers $\frac{1}{12}$–$\frac{1}{8}$ *in.—Stem slender, densely cœspitose with fascicled basal surculi, or more loosely & stoloniferous ; panicle slender, branches capillary.*—§ Glareosæ.

9. **P. polycolea,** *Stapf* ; stems fascicled wiry smooth, leaves narrowly linear or subsetaceous, lower sheaths very lax white scarious, ligule very short, panicle contracted or effuse, lower branches 2–5-nate capillary, branchlets and pedicels long, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. loosely 3-fld., gl. I acute or subacute margins hyaline, flg. gls. oblong upper $\frac{1}{6}$–$\frac{1}{4}$ hyaline, nerves and keel sparsely silky hairy or glabrous, keels of palea minutely scabrid. P. serotina, *Herb. Strach. & Winterb.* n. 11. Poa n. 15, *Herb. Ind. Or. Hf. & T.*

WESTERN HIMALAYA ; from Kashmir to Kumaon, alt. 8–12,000 ft.

Stem 6–12 in., erect or ascending, rather strict, lowest internodes loosely sheathed, uppermost rather far exserted. *Leaves* lower 8 in., long-acuminate, flat or more or less convolute, subflaccid, glabrous, smooth or margins and nerves beneath asperulous ; uppermost sheaths up to 3½ in. *Panicle* 2½–4 in., pyramidal, rigid or flaccid, lowest branches 2–3 in., flexuous, lower $\frac{1}{2}$ or $\frac{1}{3}$ naked, then loosely branched ; branches rather long, roughish ; pedicels of spikelets up to $\frac{1}{5}$ in. *Spikelets* loosely disposed, oblong, bright green or variegated ; gls. thin, I $\frac{1}{8}$–$\frac{1}{6}$ in., lanceolate, 1-nerved, keel roughish ; II longer, oblong, 3-nerved ; flg. gls. $\frac{1}{4}$–$\frac{1}{5}$ in., acute or subacute ; nerves slender, prominent or obscure, outer and keel glabrous or sparsely silky ; wool 0 or hardly any ; palea rather shorter. *Lodicules* unequally 2-lobed. *Anthers* $\frac{1}{12}$ in., linear.

10. **P. Falconeri,** *Hook. f.* ; stem tall leafy, leaves narrowed from the middle scaberulous above and beneath, upper equalling or exceeding their sheaths, ligule ovate, panicle narrow very lax, lower branches binate, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. 2–3-fld., gl. I oblong-lanceolate acute, II subobovate-oblong, flg. gls. acute or subacute tip shortly hyaline, nerves obscure sparingly pubescent, wool 0, keels of palea finely serrulate.

WESTERN HIMALAYA, *Falconer* ; Garwhal, alt. 12–13,000 ft. *Duthie* (n. 288).

Stem 2–2½ ft., erect, smooth, terete, 4–5-leaved above the base ; internodes short, or the upper more or less elongate and exserted. *Leaves* about 6 by $\frac{1}{6}$ in., subflaccid, linear, glabrous, flat or subplicate, upper about equalling their sheaths ; lower sheaths lax, upper adpressed, firm, uppermost 3–6 in. ; ligule $\frac{1}{12}$–$\frac{1}{8}$ in. *Panicle* about 4 in., narrow, very lax, flexuous and flaccid ; lower branches flexuous, erect, sparingly and loosely again branched, smooth or nearly so, branchlets roughish. *Spikelets* as long as or shorter than their pedicels, oblong, green or purplish below, gls. thin, I $\frac{1}{6}$–$\frac{1}{5}$ in., 1-nerved, margin broadly hyaline, keel minutely asperulous ; II rather longer, 3-nerved ; flg. gls. $\frac{1}{5}$ in., oblong, nerves very slender, pilose on the side at the base only ; palea rather shorter than the gl. *Lodicules* unequally 2-fid. *Anthers* about $\frac{1}{10}$–$\frac{1}{6}$ in.

11. **P. flexuosa,** *Wahlb. Fl. Carp.* 22, *Fl. Suec.* 57 (*ex parte*) ; stems usually very slender tufted stoloniferous, leaves narrowly linear acute or acuminate flat plicate or involute, cauline sometimes deflexed, panicle pyramidal lax, lower branches 2- rarely 3-nate or solitary, branches and pedicels scaberulous, spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. 2–3-fld., gls. thin I oblong-lanceolate 1–3-nerved margin broadly hyaline, II rather longer, fl. gls. broadly oblong upper $\frac{1}{4}$ or $\frac{1}{5}$ hyaline base shortly silky-hairy, nerves obscure or slender and prominent, wool scanty or 0, keels of palea scabrid. *Reichenb. Ic. Fl. Germ.* t. 84 ; *Blytt Norg. Fl.* 126. ?P. cenisia, *Duthie Grass. N.W. Ind.* 40 ; ?*Griseb. in Goett. Nachr.* (1868) 75. P. cenisia, *var. β.* flexuosa, *Hartm.*

Handb. Skand. Fl. 262; *Anders. Gram. Skand.* t. 4, f. 41. P. flexuosa, var. *a.* effusa, *Herb. Royle.*—Poa No. 9, *Herb. Strach. & Winterb.*—Poa No. 7, & P. flexuosa (*of Sikkim*), *Herb. Ind. Or. Hf. & T.*)

Alpine Himalaya, alt. 10–17,000 ft., from Kashmir to Sikkim.—Distrib. N. temp. and Arctic regions.

Stem 8–16 in., erect or with the branches geniculately ascending, smooth; lowest internodes short, laxly or closely clothed with short sheaths, the following 2-4 elongate, uppermost exserted. *Leaves* 2–5 by $\frac{1}{20}$ in., glabrous, smooth or nearly so, flaccid or rather firm; lower sheaths scarious, uppermost about 4 in.; ligule $\frac{1}{12}$–$\frac{1}{6}$ in., ovate. *Panicle* 2–4 in., erect or inclined; lower branches capillary, flexuous, often spreading or deflexed, naked except towards the tips smooth. *Spikelets* shortly or the terminal longer pedicelled, green, generally suffused with purple; gl. I $\frac{1}{8}$–$\frac{1}{7}$ in., sub-obtuse or -acute, margins broadly hyaline, keel smooth or roughish; II rather longer, ovate-oblong, sub-obtuse, 3-nerved, lateral nerves often short; flg. gls. $\frac{1}{6}$–$\frac{1}{5}$ in., nearly glabrous or keel and nerves at the base silky, smooth or minutely rough; palea rather shorter than the gl., dorsally most minutely puberulous between the keels. *Anthers* $\frac{1}{12}$–$\frac{1}{8}$ in., linear.

δ. *Glumes I & II thin, acute or acuminate, I 1-nerved, or with a very slender 2nd, rarely 3-nerved; anthers very minute, rarely $\frac{1}{16}$ in. long.—Usually perennial, sometimes flg. in the first year, or truly annual; leaves & often stem flaccid; stems loosely tufted or on a slender rhizome & with more or less elongate lower internodes, hardly stoloniferous when flowering.*—§ Micrantheræ.

‡ Ligule very short; keels of palea serrulately scabrid.

12. **P. khasiana,** *Stapf*; stem slender erect or ascending, leaves linear long-acuminate, ligule very short truncate, panicle narrowly pyramidal, lower branches 3–5-nate and branchlets scaberulous, spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. 3–4-fld., gls. rather distant, I oblong-lanceolate acute margins very narrowly hyaline, II ovate-lanceolate, fl. gls. minutely granulate, nerves prominent base nearly glabrous, wool copious or scanty, keels of palea scabrid.—Poa himalayana & Poa n. 17, *Herb. Ind. Or. Hf. & T.*

Sikkim Himalaya, alt. 11–14,000 ft., *J. D. H.*, *King's Collector.* Khasia Hills, alt. 4–6000 ft., *J. D. H. & T. T.*, *Clarke.*

Stems loosely tufted, 1–2 ft., suberect from a rooting base, internodes 5–6, upper gradually longer, loosely or rather tightly sheathed, or the upper shortly exserted. *Leaves* up to 4–6 by $\frac{1}{12}$–$\frac{1}{10}$ in., flaccid, flat, smooth or margins roughish; sheaths smooth, uppermost up to 5 in., usually longer than the blade; ligule erose. *Panicle* 4–6 in. long, lax, sometimes subsecund; lower branches subrigid or flexuous, slender, at length spreading or deflexed, unbranched except the tips or loosely branched almost from the base. *Spikelets* ovate-oblong, pale green; gls. firm; I $\frac{1}{8}$ in., 1-nerved, keel rough; II rather longer and broader, 3-nerved; flg. gls. $\frac{1}{8}$–$\frac{1}{7}$ in., oblong, obtuse, tip shortly hyaline, nerves 5 distant, keel and outer nerves sparsely silky or subglabrous. *Anthers* $\frac{1}{25}$–$\frac{1}{20}$ in.—Differs from *P. annua* var. *sikkimensis* in being taller, with leaves long-attenuate, ligule very short, branches of panicle 3–5-nate, in the wool, and in the keels of the palea not ciliate; and from *P. annua* var. *nepalensis*, in the 3–5-nate more flexuous branches, rather larger spikelets, narrower firmer gls. with more prominent nerves, rough keels of the palea and rather longer anthers.

‡‡ Ligule long; keels of palea ciliate.

1. *Spikelets obovate; gl. I & II equalling the flg. or rather shorter.*

13. **P. hirtiglumis,** *Hook. f.*; stem stout, lower internodes usually

short, upper elongate, lower sheaths lax scarious, leaves linear flat or plicate acute flaccid, panicle pyramidal, lower branches binate spreading or deflexed, spikelets $\frac{1}{6}$ in. obovate 2-fld., flg. gls. broadly oblong obtuse, base copiously silky-hairy, wool 0, keels of palea long-ciliate. P. alpina *partly*, & P. flexuosa, ??*partly Herb. Ind. Or. Hf. & T.*

Sikkim Himalaya, alt. 16–18,000 ft.; ?Lachoong Valley, alt. 11,000 ft., *J. D. H.*

Stems 8–12 in., from a slender evanescent rhizome, forming lax stoloniferous tufts with the surculi, smooth, terete; internodes mostly very short, the penultimate = $\frac{1}{4}$–$\frac{1}{3}$ the stem, uppermost up to 6 in., exserted. *Leaves* 2–3 by $\frac{1}{12}$–$\frac{1}{10}$ in., chiefly crowded towards the base of the stem, with 1–2 shorter higher up, or all short, glabrous, smooth with roughish margins; lower sheaths lax, scarious, upper up to 3 in., membranous, smooth; ligule $\frac{1}{12}$–$\frac{1}{10}$ in., ovate, obtuse. *Panicle* up to 2 in., lax, lower branches $1\frac{1}{2}$ in. shorter, naked for most of their length, smooth, branchlets roughish. *Spikelets* shortly or the terminal longer pedicelled, loosely disposed or the terminal crowded, green or suffused with violet, rachilla pilose; gls. firm, I $\frac{1}{7}$ in., acute, 1-nerved, keel roughish; II rather larger, acute, 3-nerved; flg. gls. rather longer than II, upper $\frac{1}{4}$ hyaline, nerves obscure. *Lodicules* unequally 2-lobed. *Anthers* $\frac{1}{25}$ in., linear. *Grain* elliptic-oblong, laterally compressed.

2. *Spikelets ovate or oblong; gls. I & II distinctly shorter than the flg.*

14. **P. himalayana**, *Nees ex Steud. Syn. Gram.* 256; stem tall erect or ascending slender weak, leaves linear flat long-acuminate rather flaccid, ligule ovate or oblong, panicle contracted or effuse, lower branches 2- rarely 3–4-nate long capillary flexuous, spikelets $\frac{1}{8}$–$\frac{1}{5}$ in. 3–4-fld., gls. distant, gl. I lanceolate acuminate margin hardly hyaline, flg. gls. narrow tip alone hyaline, base scantily silky-hairy, keels of palea long-ciliate. *Duthie Grass. N.W. Ind.* 40.—Deschampsia, *Wall. Cat.* n. 8885.—Poa n. 18, *Herb. Ind. Or. Hf. & T.*

Temperate & Alpine Himalaya, from Kashmir to Bhotan, alt. 7–13,000 ft., *Royle, Wallich, Griffith*, &c.

Stems 12–18 in., loosely tufted, smooth, internodes 5–6, gradually longer upwards, mostly exserted. *Leaves* $1\frac{1}{2}$–3 by $\frac{1}{12}$–$\frac{1}{10}$ in., rarely broader, narrowly linear, roughish above, glabrous beneath; sheaths appressed, smooth, upper about 4 in.; ligule about $\frac{1}{12}$ in., ovate or oblong. *Panicle* up to 6 in., rather flaccid, very lax, rachis smooth; lower branches about 2 in., loosely forked at the tips only, branchlets roughish. *Spikelets* $\frac{1}{8}$–$\frac{1}{5}$ in., rather distant, oblong, pale green; gls. thin; I $\frac{1}{12}$–$\frac{1}{8}$ in., 1-nerved, keel roughish; II rather larger, 3-nerved, lateral nerves long; flg. gls. $\frac{1}{8}$–$\frac{1}{7}$ in., oblong, subobtuse; nerves 5, slender, elongate, sometimes prominent, outer pair & keel or the keel only silky-hairy, wool scanty. *Lodicules* minute, unequally 2-fid. *Anthers* about $\frac{1}{30}$ in., linear.

15. **P. tremula,** *Stapf*; stem rooting at the base ascending, leaves flat or of the surculi plicate acute flaccid, sheaths of upper largest, ligule oblong, panicle pyramidal, lowest branches solitary or binate, spikelets lax oblong $\frac{1}{5}$–$\frac{1}{4}$ in. 3–6-fld., gl. I oblong-lanceolate, II acuminate 3-nerved, flg. gls. with upper $\frac{1}{4}$ hyaline, wool rather copious, keels of palea shortly ciliate. P. altaica, *Munro in Herb. Jacquemont* (n. 277). P. nepalensis, & nemoralis, *Herb. Ind. Or. Hf. & T.* (*in part*). P. trivialis *Griseb. in Goett. Nachr.* (1868) 75; *Duthie Grass. N.W. Ind.* 41.—Festuca, *Wall. Cat.* n. 3798.

Temperate & Alpine Himalaya; from Kashmir, alt. 8–15,000 ft., *Jacquemont*, &c., to Garwhal, *Duthie*. Western Tibet; Ladak, *Thomson, Schlagintweit.*

Stems 15–20 in., stoloniferous, erect or ascending from a prostrate rooting base; internodes 5–7, gradually lengthening upwards, all but the upper included in the sheaths. *Leaves* 4–8 by $\frac{1}{6}$ in., linear, acute, smooth or nearly so, glabrous, flaccid, upper often longer than their sheaths; lower sheaths lax, upper about 6 in., smooth; ligule $\frac{1}{8}$–$\frac{1}{6}$ in., obtuse, or shorter in the surculi. *Panicle* up to 10 in., pyramidal, often elongate, very lax and flaccid, rachis smooth; lower branches often 6 in., capillary, flexuous, loosely branched and at the tips only, nearly smooth, branchlets roughish. *Spikelets* distant, oblong, pale green; rachilla glabrous or hairy; gls. thin, rather distant; I $\frac{1}{7}$–$\frac{1}{6}$ in., acute or acuminate, 3–1-nerved, margins hyaline, keel roughish; II rather larger, broader in the middle, lateral nerves sometimes short; flg. gls. $\frac{1}{6}$–$\frac{1}{5}$ in., oblong, subobtuse, keel and all the obscure nerves and interspaces or the outer only silky-hairy; palea $\frac{1}{4}$ shorter, keels ciliate especially towards the base. *Lodicules* unequally 2-lobed. *Anthers* $\frac{1}{50}$–$\frac{1}{16}$ in., elongate-oblong.

Var. *micranthera*, Stapf; fl. gls. less hairy, anthers smaller, gls. I and II usually thinner, lateral nerves sometimes obscure.—Kashmir, alt. 12–13,000 ft., *Clarke, Duthie.*

16. **P. Gammieana,** *Hook. f.*; stem leafy throughout, leaves broadly linear long-acuminate, ligule oblong, panicle contracted or at length open, lower branches binate or solitary, spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. 3–2-fld., gls. firm, I lanceolate acute, II narrowly oblong, fl. gls. oblong tip only hyaline, nerves prominent outer and keel silky-hairy, keels of palea shortly ciliate, wool scanty.

SIKKIM HIMALAYA; Tankra Mts., alt. 12,000 ft., *Gammie.*

Stems 1–2 ft., terete, smooth, leafy; internodes 7–8. *Leaves* up to 4 by $\frac{1}{5}$ in., scattered along the whole stem up to the panicle, flat or plicate, glabrous, smooth, except the margins and midrib, upper shorter; lower sheaths lax, median $2\frac{1}{2}$–$3\frac{1}{2}$ in., asperulous or nearly smooth, except the margins; ligule $\frac{1}{6}$-$\frac{1}{4}$ in., acute, dorsally roughly puberulous. *Panicle* up to $4\frac{1}{2}$ in., narrow, lower branches capillary, flexuous, loosely branched at the tips only; branches and branchlets smooth. *Spikelets* $\frac{1}{4}$ in. and upwards, shortly or the terminal longer pedicelled, oblong, acute, pale green; gls. firm, I $\frac{1}{6}$ in., 3-nerved, margin entire hardly hyaline; II rather longer, narrowly oblong, 3-nerved; fl. gls. $\frac{1}{5}$ in., acute or subobtuse, keel and outer nerves prominent silky-hairy, palea rather shorter. *Lodicules* subquadrate, shortly 2-lobed. *Anthers* $\frac{1}{25}$ in., oblong.

17. **P. annua,** *Linn. Sp. Pl.* 68; stem shortly creeping and rooting stoloniferous, leaves flat flaccid acute, panicle ovate or oblong sometimes subsecund lower branches at length spreading or deflexed, spikelets 3–7-fld., gls. I and II oblong-lanceolate obtuse, flg. gls. prominently 5-nerved margins and tip broadly or narrowly scarious, keel and nerves below more or less silky ciliate, keels of palea long-ciliate, anthers minute. *Host Gram. Austr.* ii. t. 64; *Fl. Dan.* t. 1686; *Engl. Bot.* t. 1141; *Knapp Gram. Britt.* t. 52; *Reichb. Ic. Fl. Germ.* t. 82; *Ledeb. Fl. Ross.* iv. 377; *Boiss. Fl. Orient.* v. 601; *Griseb. in Goett. Nachr.* (1868) 75; *Wight Cat.* n. 1789; *Thw. Enum. Pl. Zeyl.* 372; *Trim. Cat. Ceyl. Pl.* 110; *Aitchis. Cat. Panjab Pl.* 168; *Duthie Grass. N.W. Ind.* 40, *Fodd. Grass. N. Ind.* 67. P. alpina, *Herb. Strach. & Winterb.* n. 12. P. Royleana, *Nees ex Steud. Syn. Gram.* 256. *Herb. Strach. & Winterb.* n. 3; *Duthie l. c.*; *Griseb. in Goett. Nachr.* (1868) 75.

Throughout the TEMPERATE & SUBALPINE HIMALAYA, & WESTERN TIBET, alt. 6–12,000 ft., the KHASIA and NILGHIRI HILLS, alt. 5–7000 ft. (introduced?). CEYLON (introduced?)—DISTRIB. Europe, Temp. Asia.

Annual or perennial; stolons slender. *Stems* 6–12 in., erect, usually geniculate, slightly compressed, smooth; internodes gradually lengthening upward, upper exserted or not. *Leaves* 2–4 in., rarely more, by $\frac{1}{22}$–$\frac{1}{8}$ in., linear, smooth, margin roughish; sheaths up to 2 in., lax, subcompressed, usually longer than the blade, margins roughish; ligule ovate or oblong, up to $\frac{1}{8}$ in., shorter in the lower leaves. *Panicle* up to 3¼ in., rigid, lower branches up to 1½ in., 2- rarely 3–5-nate or solitary, spreading, naked to the middle and branchlets smooth. *Spikelets* $\frac{1}{8}$–$\frac{1}{5}$ in., subsessile or shortly pedicelled, more or less crowded, ovate or oblong-ovate, green or purplish; gl. I $\frac{1}{12}$–$\frac{1}{10}$ in., lanceolate, acute, 1-nerved, with sometimes 2-slender lateral nerves, keel minutely scaberulous; II rather longer, 3-nerved; flg. gls. $\frac{1}{8}$ in., obtuse, rarely subacute. *Anthers* $\frac{1}{30}$ in. *Grain* $\frac{1}{25}$–$\frac{1}{12}$ in., oblong.

Var. *nepalensis*, Griseb. in Goett. Nachr. (1868) 75, perennial, stem 20 in., leaves 12–20 in., ligule shorter, panicle up to 6 in., lower branches almost capillary, upper and branchlets subscaberulous, spikelets more distant longer pedicelled glaucous green, keel and outer nerves of fl. gl. silky-hairy to the middle, wool often copious.—P. annua, β. *Nees in Herb. Royle.* Poa nepalensis, *Wall. ex Duthie Grass. N.W. Ind.* 40.—Poa, *Wall. Cat.* n. 3791. Western Himalaya, from Dalhousie to Nepal.

Var. *sikkimensis*, Stapf; perennial, rootstock slender giving off stems surculi and stolons at the nodes, leaves up to $\frac{1}{5}$ in. broad, ligule $\frac{1}{8}$–$\frac{1}{4}$ in. denticulate, panicle 3–6 in., branches slender flexuous and branchlets subscaberulous, glumes firmer, flg. gls. nearly glabrous, wool 0. P. alpina & nepalensis (*in part*), *Herb. Ind. Or. Hf. & T.*—Eastern Himalaya, alt. 11–15,000 ft., J. D. H., &c., W. Bhotan, *Cummins.* Some specimens approach *P. himalayana* in their slender habit and narrower leaves, but the ligule is much larger.

UNKNOWN SPECIES.

P. HANSIANA, *Royle Ill. Bot. Himal.* 416 (*name*).—Hansi & Saharunpore, *Royle.* Probably, from the localities, *P. annua.*

119. COLPODIUM, *Trin.*

See 103. **Catabrosa,** *Beauv.* p. 310.

120. GLYCERIA, *Br.*

Perennial, rarely annual grasses. *Leaves* linear, flat or convolute. *Spikelets* few or many-fld., in contracted or effuse panicles; rachilla jointed between the flg. gls. rarely hairy, uppermost fl. usually imperfect. *Glumes* I and II hyaline, empty, persistent, 1–5-nerved; flg. gls. broadly oblong obovate or fan-shaped, dorsally rounded, 3–9-nerved, nerves often obscure vanishing below the broadly hyaline obtuse rounded (rarely subacute) or truncate tip; keels of palea smooth or scaberulous. *Lodicules* 2, minute or well developed. *Stamens* 3. *Styles* short, distinct. *Grain* terete or compressed, free or subadherent to the palea—Species about 30 enumerated.

Sect. I. HYDROCHLOA. *Flg. glumes* strongly 7-nerved. *Lodicules* minute.

1. **G. tonglensis,** *Clarke in Journ. Linn. Soc.* xv. (1876) 119; very slender, leaves narrow smooth, panicle elongate slender, branches few erect at length spreading unequal lower up to 4 in. erect at length deflexed, spikelets $\frac{1}{6}$–$\frac{1}{4}$ in. 4–8-fld., gls. I and II 1-nerved. G. caspica, *Griseb. in Goett. Nachr.* (1868) 76 (*non Trin.*) G. fluitans, *Duthie Grass. N.W. Ind.* 41 (*non Br.*). G. rivularis, *Jacquem. mss.*—Poa n. 24, *Herb. Ind. Or. Hf. & T.*

TEMPERATE HIMALAYA, from Kashmir, alt. 7–9000 ft., and Kumaon, alt. 4–5000 ft., to Sikkim, alt. 7–12,000 ft. Munipore, alt. 9000 ft., *Watt.*

Stems widely creeping in wet places, more tufted in drier, 4–18 in., ascending, slender. *Leaves* 3–8 by $\frac{1}{10}$–$\frac{1}{6}$ in., flat, tips obtuse; sheaths smooth, closed to the mouth; ligule short, rounded or truncate, 2-auricled. *Panicle* very variable, 4–8 in. long; rachis slender; branches few-fld. *Spikelets* pale-green or purplish, rarely more than 4-fld.; rachilla flexuous, glabrous; glumes glabrous, I and II ovate or ovate-oblong, hyaline, obtuse or subacute, I = about $\frac{1}{2}$ II; flg. gls. chartaceous, ovate-oblong, tip rounded hyaline, nerves 7 very prominent; palea rigid, incurved, keels strong scaberulous. *Anthers* very small, linear-oblong. *Grain* long, slender.—Very near *G. fluitans*, Br., of which it may be a variety, but differs from it in the much smaller and fewer-fld. spikelets. Some luxuriant specimens from marshy woods in Sikkim have larger 6–10-fld. spikelets nearly $\frac{1}{3}$ in. long.

Sect. II. ATROPIS. *Fl. gls.* 5-nerved. *Lodicules* large, hyaline.

2. **G. distans,** *Wahlb. Fl. Upsal.* 36; leaves linear flat or convolute smooth, panicle erect pyramidal or contracted lower branches up to 2$\frac{1}{2}$ in. at length deflexed, spikelets $\frac{1}{12}$–$\frac{1}{8}$ in. 4–6-fld., gls. I and II very unequal scarious obtuse, flg. gls. broadly ovate-oblong or cuneate tip rounded or retuse and mucronulate crenate. *Fl. Dan.* t. 2222; *Reichb. Ic. Fl. Germ.* t. 79; *Duthie Grass. N.W. Ind.* 41. Poa distans, *Linn. Mant.* 32; *Host Gram. Austr.* ii. t. 63; *Fl. Dan.* t. 251; *Engl. Bot.* t. 986; *Knapp Gram. Britt.* t. 47. Atropis distans, *Griseb. in Ledeb. Fl. Ross.* iv. 388, *in Goett. Nachr.* (1868) 76; *Boiss. Fl. Orient.* v. 615. Festuca distans, *Kunth Revis. Gram.* i. 129, *Enum. Pl.* i. 393, *Suppl.* ii. 303.

WESTERN TIBET, alt. 10–16,000 ft., abundant, *Thomson*, &c.—DISTRIB. Europe, N. Asia.

Stems densely tufted with copious fibrous roots, 4–24 in. high, erect or ascending, stout or slender, leafy upwards or at the base only. *Leaves* very various, flat and $\frac{1}{3}$ in. broad in large specimens, quite smooth; sheaths open for $\frac{3}{4}$ of their length, lower membranous shining; ligule short, scarious. *Panicle* 3–6 in., rachis and branches smooth, lower branches 2–5-nate. *Spikelets* minute, green, more or less shining, minutely scaberulous; gl. I oblong, 1-nerved; II almost twice as large, usually 1-nerved; flg. gls. very variable, base minutely hairy, margins and tip broadly hyaline, nerves reaching $\frac{1}{2}$–$\frac{2}{3}$ from the base; keels of palea ciliate. *Lodicules* oblong, toothed. *Anthers* $\frac{1}{30}$–$\frac{1}{40}$ in.

Var. *convoluta*, Boiss. l. c.; stem taller very slender, leaves all convolute, panicle long narrow, branches shorter erect. G. convoluta, *Fries Mant.* iii. 176. Festuca convoluta, *Kunth Revis. Gram.* i. 129; *Enum. Pl.* 393. Atropis tenuiflora, *Griseb. in Ledeb. Fl. Ross.* iv. 389, *in Goett. Nachr. l.c.* 76.—Tibet common, N. Europe and Asia.—A different-looking plant from *G. distans* in its Tibetan form, being much more slender, with narrower more ovate flg. gls.; but very variable, and with intermediates.

3. **G. Thomsoni,** *Stapf*; leaves rigid asperulous above smooth beneath, lowest branches of panicle 2–3 in. spikelets up to $\frac{1}{3}$ in. oblong 3–5-fld., gl. I $\frac{1}{10}$ in. oblong-lanceolate subacute, II $\frac{1}{8}$ in. elliptic-oblong obtuse, flg. gl. $\frac{1}{6}$ in. tip subacute and margins hyaline yellow. Poa compressa, *Griseb. in Goett. Nachr.* (1868) 75.

WESTERN TIBET, Rupchu above Pugha, alt. 15,500 ft., *Thomson*.

Tufted, innovations erect. *Stem* rather stout, compressed, glabrous, sheathed throughout. *Leaves* up to 6 in., tapering to an acute or subobtuse point, upper short, pale green, thick, rigid, nerves 7–9 strong; sheaths more or less compressed, not keeled, smooth, striate, loose above; ligule broadly ovate, obtuse, scarious. *Panicle* ovate-oblong or contracted, erect or inclined; rachis scaberulous or smooth below; branches geminate, filiform, sparingly divided at length spreading, naked to about the middle; lateral pedicels short. *Spikelets* pale green or variegated; rachilla glabrous; gl. I 1-nerved, margin broadly hyaline; II 3-nerved, tip and margins hyaline; flg. gls. smooth, glabrous, 5-nerved, outer nerves short. *Lodicules* obliquely ovate, acute. *Anthers* $\frac{1}{10}$ in. *Ovary* obliquely ovoid; styles very short, subterminal. —The long subacute flg. gls. are characteristic.

4. **G. poaeoides,** *Stapf*; leaves complicate scabrid above, longest branches of panicle 1–1$\frac{1}{2}$ in., spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. 2–4-fld., gl. II about $\frac{1}{10}$ in., flg. gls. $\frac{1}{8}$ in. obtuse tip broadly hyaline.

WESTERN TIBET; Rupchu, grassy plains at the head of the Salt Lake, *Thomson.*

Stems 1–1$\frac{1}{4}$ ft., tufted, erect; innovation extravaginal erect, their sheaths open to near the base. *Leaves* 2–4 in., linear subacute, rather thick, smooth beneath, ligule triangular ovate acute. *Panicle* 2–4 in., erect or inclined, rachis scabrid; branches 2–4-nate, filiform, erect, sparingly divided, scaberulous, lowest very unequal, lateral pedicels clavate. *Spikelets* oblong rather loose, pale green or purplish, rachilla glabrous, disarticulating; gls. thin, finely ciliate-serrulate; callus glabrous; I ovoid acute, 3-nerved, side nerves faint short; II similar with stronger side-nerves; flg. gls. broadly elliptic-oblong, quite glabrous, dorsally rounded, nerves obscure except with transmitted light; keels of palea scantily shortly ciliate. *Lodicules* obliquely ovoid. *Anthers* $\frac{1}{15}$ in. *Ovary* pyriform, glabrous.

121. **FESTUCA,** *Linn.* (by O. Stapf.)

Perennial, rarely annual grasses. *Leaves* flat convolute or setaceous. *Spikelets* 3– many-fld., in open or contracted sometimes spiciform panicles, uppermost fl. imperfect; rachilla jointed below the flg. gls. not produced beyond the uppermost imperfect. *Glumes* 5 or more; I and II subequal or unequal, empty, persistent, keeled; I 1- very rarely 3-nerved, II 3- very rarely 5-nerved; flg. gls. narrow, acute acuminate or awned, 5–7-nerved, dorsally rounded, or keeled towards the tip only; palea 2-keeled. *Lodicules* 2. *Stamens* 3. *Ovary* glabrous or crown more or less hairy, not or slightly enlarged; styles terminal, rarely subterminal, stigmas plumose. *Grain* ventrally concave or grooved rarely flat, glabrous or crown hairy, free or more or less adherent with the palea, rarely with the gl., hilar area elongate. —Species many, chiefly of temp. climates.

The species are for the most part extremely difficult of discrimination.

Sect. I. EU-FESTUCA. Perennial. *Empty gls.* subequal. *Stamens* 3.

A. Vernation of all the leaves conduplicate permanently, or cauline more or less flat, always very narrow.

* Flg. gls. strongly involute, tightly embracing the grain firm, scabrid or if smooth not shining; ovary glabrous, innovations always intravaginal, their leaf-sheaths usually open to or near to the base, or middle in *F. Cumminsii.*

1. **F. valesiaca,** *Schleich. ex Gaud. Agrost. Helvet.* i. 242; slender, rigid, erect, leaves 2–6 in., panicle 1–2 in. narrow usually stiff, branches very short, spikelets $\frac{1}{6}$–$\frac{1}{5}$ in. 3–4-fld., awn much shorter than its gl., anthers linear $\frac{1}{30}$–$\frac{1}{14}$ in., grain adherent to palea and often to the gl. *Kunth Enum. Pl.* i. 401, *Suppl.* 334; *Reichb. Ic. Fl. Germ.* t. 63; *Steud Syn. Gram.* 306. F. duriuscula, & parviflora, *Hack. in Herb. Duthie,* & var. tenuis, *Hack. Monogr. Fest. Europ.* 288. F. ovina, L., *var.* Pseudovina, *Hack. l. c.* F. ovina, *Host Gram. Austr.* ii. 62, t. 86 (*non Linn.*). F. stricta, *Herb. Royle.* F. dubia & F. filiformis, *Jacquem. mss.*—F. n. sp. *Herb. Strach. & Winterb.* n. 2.

TEMPERATE and ALPINE HIMALAYA, alt. 10-16,000 ft., from Kashmir to Sikkim. —DISTRIB. Central and Eastn. Europe, Orient, Central Asia, Rocky Mts.

Stems 4–14 in. tufted, nodes 2, both in the lower $\frac{1}{4}$ of the stem. *Leaves* 2–6 in., setiform to capillary, 3–5-nerved, green or glaucous, rarely rough, bands of sclerenchyma distinct; sheaths of innovs. tight, smooth, open to near the base, persistent when dry; ligule very short, obscurely auricled. *Panicle* contracted; branches erect, solitary or 2-nate; lateral pedicels shorter than the spikelets. *Spikelets* oblong, broadly obovate when open, pale green or purplish; gl. I $\frac{1}{13}$ in., lanceolate, acute or subacute; II similar $\frac{1}{8}$ in.; flg. gls. $\frac{1}{8}$–$\frac{1}{6}$ in., smooth to scaberulous, pruinose, 5-nerved; palea oblong-lanceolate, sub–2-toothed, keels scabrid. *Lodicules* minute, obliquely ovoid. *Anthers* $\frac{1}{30}$–$\frac{1}{14}$ in., linear. *Ovary* glabrous. *Grain* $\frac{1}{14}$ in., ventrally grooved, hilum almost as long as itself.—As represented in India *F. valesiaca* is a very well defined species.

Var. *tibetica*, Stapf; stem 2–6 in., sheaths entire below the middle, panicle $\frac{1}{2}$–1 in. long up to $\frac{1}{3}$ in. broad, flg. gls. $\frac{1}{6}$ in., more or less purplish black and scabrid in the upper $\frac{1}{3}$, awn minute, anthers $\frac{1}{36}$–$\frac{1}{30}$ in. F. ovina, var. alpina, *Griseb. in Goett. Nachr.* (1868) 73. Tibet N. of Sikkim, alt. 17–19,000 ft. Differs from F. ovina, *var.* Halleri, to which it is referred by *Hack. l. c.* 112, in the sheaths being open to the middle and in the very minute anthers.

2. **F. Cumminsii,** *Stapf*; stem slender, leaves $\frac{3}{4}$–4 in., sheath open to below the middle, panicle 2–4 in. narrow nodding or flexuous, branches distant erect and flexuous, spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. elliptic or (open) obovate awned, rachilla scabrid, flg. gls. oblong-lanceolate, palea 2-fid, anthers elliptic $\frac{1}{30}$–$\frac{1}{25}$ in., grain free. F. duriuscula, *Herb. Ind. Or. Hf. & T.* (*in part*).

SIKKIM HIMALAYA, alt. 11–12,000 ft., *J. D. H.* W. BHOTAN, *Cummins.*

Stems 1–1$\frac{1}{2}$ ft., tufted, nodes 2–3 uppermost towards the middle, smooth except (usually) below the panicle. *Leaves* setaceous, or cauline rarely flat, very narrow ($\frac{1}{20}$ in.), subacute, smooth, nerves 5 green strong above, obscure beneath, marginal and carinal bands of sclerenchyma very slender; sheaths of innovs. open far beyond the middle, smooth, subpersistent, of the cauline leaves tight; ligule short, auricles usually long and acute. *Panicle* with scabrid rachis; branches usually solitary, dividing from near the base, scabrid; lateral pedicels shorter than the spikelets or very short. *Spikelets* pale green or purple, more or less scaberulous; I $\frac{1}{10}$–$\frac{1}{7}$ in., 1-nerved; II lanceolate, acute, $\frac{1}{7}$–$\frac{1}{4}$ in., 3-nerved; flg. gls. $\frac{1}{5}$–$\frac{1}{4}$ in., awn half as long to as long as the gl.; palea as long as the gl., conspicuously 2-fid, more or less scabrid. *Lodicules* 2-lobed. *Ovary* glabrous. *Grain* linear-oblong, $\frac{1}{7}$–$\frac{1}{6}$ in., ventrally grooved, hilum slightly exceeding the middle.

3. **F. polycolea,** *Stapf*; densely tufted, leaves setaceous, sheaths of innovs. crowded open to the base, panicle 2–3 in. open or contracted rigidly erect, rachis scabrid rarely nodding, branches subsolitary, spikelets $\frac{1}{2}$–$\frac{1}{3}$ in., glumes scabrid, flg. gls. oblong-lanceolate awned, palea 2-fid, anthers linear $\frac{1}{17}$–$\frac{1}{14}$ in., grain free. F. duriuscula, *Herb. Ind. Or. Hf. & T.* (*in part*).

NEPAL, *Wallich.* SIKKIM, alt. 12–16,000 ft., *J. D. H.*, &c.

Stems $\frac{3}{4}$–1$\frac{1}{4}$ ft., nodes 2 in the lower half or third, smooth or scabrid below the panicle. *Leaves* rather rigid, of the innovations up to 6–8 in., subacute, smooth, not or obscurely sulcate, 5-nerved, bands of sclerenchyma continuous beneath or nearly so; sheaths persistent, pale, shining, of the stem tight smooth; ligule very short, obtusely auricled. *Panicle* ovate or narrower; lower branches scabrid, sometimes 2-nate, $\frac{1}{2}$– rarely 1$\frac{1}{2}$ in., very sparingly divided from near the base, upper with 1–2 spikelets; lateral pedicels shorter than the spikelets. *Spikelets* greenish; glumes firmly membranous; I $\frac{1}{10}$ in., subulate-lanceolate, 1-nerved; II $\frac{2}{9}$–$\frac{3}{10}$ in., lanceolate, acute; flg. gls. $\frac{1}{3}$–$\frac{2}{5}$ in., strongly involute, nerves 5 faint; awn from $\frac{1}{2}$ to as long as the gl.; palea as long as the gl., scabrid or puberulous. *Lodicules* 2-lobed. *Ovary* glabrous. *Grain* $\frac{1}{10}$ in., linear-oblong, deeply grooved, hilum slightly exceeding the middle.

Var. *brevis*, Stapf; stems 4–6 in. often shorter than the leaves, sheaths open to the middle only, panicle $\frac{1}{2}$–$1\frac{1}{2}$ in. contracted, flg. gls. $\frac{1}{7}$ in., anthers $\frac{1}{22}$–$\frac{1}{17}$ in.—Sikkim Himalaya, alt. 11–13,000 ft.—Referred by Hackel (Monogr. Festuc. Eur. 89) to *F. ovina*, var. *supina*, but evidently only a dwarfed state of *F. polycolea*.

** Flg. gls. glabrous or nearly so except sometimes towards the tip, thin, more or less shining; ovary very rarely glabrous.—Innovations intravaginal, their sheaths closed to beyond the middle, except in *nitidula*.

† *Flg. gls.* $\frac{1}{5}$–$\frac{1}{7}$ *in.; anthers minute; panicle usually very flexuous and flaccid.*

4. **F. nitidula,** *Stapf*; stems tufted, node solitary near the base, leaves 1–2 in. very narrow, panicle $1\frac{1}{2}$–3 in., ovate open or contracted, branches usually spreading flexuous naked to beyond the middle, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. 2–5-fld., margins of gls. narrowly hyaline, flg. gls. $\frac{1}{7}$ in. oblong-lanceolate, awn half as long as the gl., anthers elliptic $\frac{1}{50}$–$\frac{1}{40}$ in., ovary top sparsely hispidulous. F. pumila, *Duthie Grass. N.W. Ind.* 42 (*non Vill.*); *Herb. Strach. & Winterb.*—Festuca, n. 10, *Herb. Ind. Or. H.f. & T.*

WESTERN TIBET; Nubra, alt. 12–14,000 ft., *Thomson.* N. of Kumaon, alt. 15,000 ft., *Strachey & Winterbottom.*

Stems $\frac{1}{2}$–$1\frac{1}{4}$ ft., far exserted beyond the uppermost sheath, smooth. *Leaves* complicate, rather thick, green, 5–7-nerved, smooth, bands of sclerenchyma hardly any; sheaths of innovs. closed to about $\frac{1}{3}$, smooth; ligule very short, ciliolate, more or less auricled. *Panicle* flexuous, sometimes flaccid; rachis smooth below; branches up to $\frac{1}{2}$ in., solitary or lowest 2-nate, subcapillary, sparingly divided; lateral pedicels often very short. *Spikelets* elliptic to lanceolate, green or purplish; gls. thinly membranous, I $\frac{1}{17}$–$\frac{1}{10}$ in., lanceolate; II $\frac{1}{8}$ in., lanceolate, distinctly 3-nerved; flg. gls. smooth, very minutely scaberulous below the tip; awn $\frac{1}{2}$ as long as the gl.; palea about as long as the gl., keels scaberulous. *Lodicules* 2-lobed. *Grain* $\frac{1}{10}$ in., free or adherent to the base of the palea, linear-oblong, hilum $\frac{1}{3}$ of the grain.—Thomson's specimens are tall and very slender, Strachey & Winterbottom's only 3–5 in. high.

5. **F. undata,** *Stapf*; stems tufted erect or base geniculate sheathed beyond the middle or almost to the panicle, nodes 2–3, uppermost about median, leaves subsetaceous subacute complicate or the cauline flat tapering to a fine point, panicle 4–6 in. flaccid flexuous, branches few subcapillary flexuous, spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. 2–4-fld. lanceolate, gls. thinly membranous, flg. gls. oblong-lanceolate, awn 0 or very short, anthers not $\frac{1}{25}$ in., top of ovary hispidulous rarely glabrous.—Bromus, No. 16, *Herb. Ind. Or. H.f. & T.*

SIKKIM HIMALAYA, alt. 12,000 ft., *J. D. H.*

Stems 1–2 ft. *Leaves* glabrous or puberulous above, 7–9-nerved, green; sheaths tight, basal thin brown rarely finely hairy; ligule very short, truncate, scarcely auricled, glabrous or sparsely ciliolate. *Panicle* often more or less secund; rachis smooth or scabrid, very slender; branches simple or very sparingly divided, solitary or the lowest binate up to 3 in. *Spikelets* pale green, somewhat shining; rachilla scantily scabrid, internodes very short; gl. I $\frac{1}{12}$ in., lanceolate, 1-nerved; II $\frac{1}{8}$ in., broadly lanceolate, acuminate, 3-nerved; palea oblong-lanceolate, about equal the gl., obscurely 2-toothed. *Lodicules* obliquely ovoid, sub-2-lobed. *Anthers* violet. *Styles* terminal.

Var. *aristata*, Stapf; awn as long as the gl. or rather longer very slender, anthers $\frac{11}{20}$–$\frac{13}{20}$ in., ovary (very young) glabrous.—Bromus?, No. 15, *Herb. Ind. Or. Hf. & T.*—Sikkim, alt. 11,000 ft.

†† *Flg. gls.* $\frac{1}{5}$–$\frac{3}{10}$ in.; *anthers linear,* $\frac{1}{12}$–$\frac{1}{6}$ in.; *panicle less wavy or flaccid.*

6. **F. kashmiriana,** *Stapf*; stems tufted, nodes 1–2 rarely 3 uppermost below the middle, leaves of the innovs. hexagonal, panicle 2–5 in., branches solitary lowest rarely geminate, spikelets $\frac{1}{3}$–$\frac{2}{5}$ in. elliptic-oblong 3–5-fld., gls. thinly membranous, flg. gls. oblong-lanceolate $\frac{1}{5}$–$\frac{1}{4}$ in., awn = $\frac{1}{2}$ gl. or longer, top of ovary densely hispid, grain loosely adherent to the palea. F. duriuscula, *Duthie Grass. N.W. Ind.* 41; *Herb. Royle & Hook. f. & T. in part.*

TEMPERATE and ALPINE HIMALAYA; from Kashmir to Kumaon, alt. 8–14,000 ft.

Stem 1–2 ft., innovations always apo-geotropic; sheaths of (always?) intravaginal shoots, tight, smooth, closed to the middle or $\frac{3}{4}$, rarely higher. *Leaves* (cauline) setaceous, usually shorter than of the innovations, rarely flat, more or less puberulous above, smooth beneath, green, sulcate between the 5–7 nerves, bands of sclerenchyma distinct; ligule short, truncate, ciliolate, scarcely auricled. *Panicle* usually contracted, rather stiff or flexuous; rachis scaberulous or smooth below; branches erect or spreading, filiform, scaberulous, sparingly divided from below the middle; lateral pedicels = $\frac{1}{2}$ the spikelet or shorter. *Spikelets* green or tinged with purple or violet; gls. smooth or obscurely scaberulous; internodes of rachilla $\frac{1}{20}$ in., minutely scaberulous; gl. I $\frac{1}{12}$–$\frac{1}{10}$ in., lanceolate, 1-nerved; II $\frac{1}{7}$ in., lanceolate or ovate-lanceolate, acute, 3-nerved; flg. gls. faintly 5-nerved. *Lodicules* obliquely oblong, 2-lobed. *Anthers* $\frac{1}{12}$–$\frac{1}{8}$ in., linear. *Grain* $\frac{1}{8}$ in., linear-oblong, grooved, hilum nearly as long as the grain.—I have seen only one specimen amongst all the forms of *F. kashmiriana* with apparently (but by no means typical) extravaginal innovations. Variegated specimens of the type resemble var. *nigricans* (*F. nigricans*, Schleich.) of *F. violacea*, and *F. rubra* var. *fallax*, forma *alpestris* (*F. nigrescens*, Lam.) from which they differ in absence of extravaginal shoots, more open sheaths, and more hispid ovary with a slightly developed constriction below the top.

Var. *ligulata*, Stapf; more flaccid, leaves up to 1 ft., ligule up to $\frac{1}{12}$ in. with more or less acute auricles. F. violacea, *var.* virescens, and F. rubra genuina, Hack. mss.—Kashmir, alt. 11–13,000 ft., *Duthie.*

Var. *debilis*, Stapf; very flaccid, cauline leaves up to 8 by $\frac{1}{10}$ in. pubescent above, nerves very prominent beneath, panicle flaccid, spikelets green, awn long or short. F. heterophylla, *Lamk. ex Hack. mss.*; *Griseb. in Goett. Nachr.* (1868) 73.—Kashmir, alt. 8–12,000 ft., *Duthie.*—Approaches closely shade forms of *F. heterophylla*, differing only in the structure of the leaves.

Var. *simlensis*, Stapf; taller, more robust, cauline leaves up to 1 ft. by $\frac{1}{10}$ in. almost flat, ligule short, panicle 6–12 in., spikelets $\frac{1}{2}$–$\frac{3}{4}$ in., internodes of rachilla up to $\frac{1}{8}$ in., gl. I $\frac{1}{7}$–$\frac{1}{6}$ in., II $\frac{1}{5}$–$\frac{1}{4}$ in., flg. gls. up to $\frac{1}{4}$ in., awn = the gl. or rather shorter. F. duriuscula, *Herb. H. f. & T.* (*in part*). ? F. ovina, *Griseb. in Goett. Nachr.* (1868) 73.—Simla, alt. 7–8000 ft., *Thomson, Duthie.*—Habit rather of *F. duriuscula*, differing in the more closed sheaths and hairy tip of ovary. Distinguished from certain forms of *F. rubra*, L., by the hairy ovary and absence of stolons.

7. **F. altaica,** *Trin. ex Ledeb. Fl. Alt.* i. 109, *Fl. Ross.* iv. 354, *Ic.* t. 228; stems tufted, nodes 1–2, leaves up to 9 in. subsetaceous, sheaths crowded open to the middle latterly to the base, ligule very short, panicle 4–6 in. very loose, lower branches 2-nate long slender with 1–2 subterminal spikelets, lateral pedicels equal to or longer than the 3–6-fld. variegated spikelets which are $\frac{1}{3}$–$\frac{1}{2}$ in. long, glumes thin tips and margins hyaline,

flg. gls. $\frac{1}{4}$–$\frac{3}{10}$ in., awns shorter or gl. mucronate, ovary pyriform tip hispidulous. *Kunth Enum. Pl.* i. 411; *Steud. Syn. Gram.* 315. F. Duthiei, *Hack. mss.*

Western Tibet; Dras, alt. 11–12,000 ft., *Duthie*; Karakoram, alt. 14,500 ft., *Clarke*.—Distrib. Central Asia, Siberia.

Stems 1$\frac{1}{2}$–2$\frac{1}{2}$ ft., smooth. *Leaves* subrigid, complicate, smooth, margin obscurely scabrid, nerves 7–9 slightly prominent, bands of sclerenchyma distinct, cauline sometimes flat, short; sheaths of innovs. open to the middle, soon splitting to the base; ligule very short. *Panicle* ovate, rachis slender smooth, branches up to 3 in. subcapillary flexuous. *Spikelets* oblong, internodes $\frac{1}{20}$ in., scaberulous; gl. I $\frac{1}{7}$-$\frac{1}{5}$ in. lanceolate, acute, 1-nerved, II $\frac{1}{6}$–$\frac{1}{5}$ in., distinctly 3-nerved; flg. gls. oblong-lanceolate, smooth or subscaberulous towards the acute tip, nerves 5 faint; palea = the gl., linear-oblong, keels minutely scaberulous. *Lodicules* obliquely ovate. *Anthers* $\frac{1}{7}$–$\frac{1}{6}$ in., linear. *Styles* terminal.—Very near the American *F. scabrella*, Torr. Trinius describes the rhizome as stoloniferous, but I find no trace of stolons.

*** Flg. gls. glabrous or pubescent; top of ovary glabrous, rarely minutely hairy. Innovations intra- and extravaginal, their leaf-sheaths closed almost to the mouth, the extravaginal often stoloniferous.

8. **F. Levingei**, *Stapf*; stems smooth, nodes 2, upper in $\frac{1}{3}$ of stem, cauline leaves up to 4 in. very narrow, sheaths of innovs. open to middle, glabrous or minutely puberulous above, ligule very short obscurely auricled, panicle 2–3 in. linear strict, branches usually binate erect, lower naked for $\frac{1}{2}$, spikelets $\frac{1}{5}$–$\frac{1}{4}$ in. 4–5-fld. compact, internodes of rachilla very short minutely scaberulous, flg. gls. $\frac{1}{5}$–$\frac{3}{10}$ in. oblong acute awnless or mucronate, anthers oblong, ovary glabrous or nearly so.

Kashmir, *Levinge*.

Stems 1$\frac{1}{2}$ ft., extravaginal innovations present very slender, their leaves finely setiform, flaccid, green, 5-nerved, bands of sclerenchyma fine. *Panicle* striate, branches often appressed to the rachis, lowermost up to 1$\frac{1}{2}$ in.; lateral pedicels short, thick. *Spikelets* green; rachilla minutely scaberulous; gls. membranous, glabrous or minutely puberulous or scaberulous; I $\frac{1}{10}$ in., lanceolate, acute; II broadly oblong-lanceolate, acute or subobtuse; palea linear-oblong, almost = gls., keels ciliolate. *Lodicules* oblong, sub-2-lobed. *Anthers* $\frac{3}{10}$–$\frac{1}{3}$ in. *Grain* $\frac{1}{12}$ in., loosely adherent to the palea, linear-oblong, grooved, hilum almost = the grain.

9. **F. rubra**, *Linn. Sp. Pl.* 74; stems smooth, nodes 2, extravaginal innovations frequent ascending or stoloniferous, leaves subsetaceous, ligule very short truncate exauricled, panicle 3–5 in., rachis scabrid, branches solitary or lowest binate divided from or near the base, spikelets $\frac{2}{5}$–$\frac{2}{3}$ in. oblong loose 4–9-fld., flg. gls. strongly involute oblong-lanceolate margin above broadly hyaline awned, anthers linear, ovary glabrous. *Host Gram. Austr.* ii. 59, t. 82; *Engl. Bot.* t. 2056; *Kunth Enum. Pl.* i. 401, *Suppl.* 334; *Steud. Syn. Gram.* 308; *Ledeb. Fl. Ross.* iv. 352; *Boiss. Fl. Orient.* v. 62; *Duthie Grass. N.W. Ind.* 42 (*in part*); ? *Griseb. in Goett. Nachr.* (1868) 74.

Temp. and Subalpine Himalaya, alt. 6–13,500 ft. Khasia Hills, alt. 5–6000 ft. (var. *Clarkei*).—Distrib. Temp. and Arctic Europe and Asia.

Stems 1$\frac{1}{2}$–2$\frac{1}{2}$ ft., erect or geniculate below, striate. *Leaves* 3–5 in., all subsetaceous or cauline linear flat, rather thick, green, 3–7-nerved, subacute or almost obtuse, smooth; sheaths of innovs. tight, smooth, closed almost to the mouth. *Panicle* very variable, narrow, nodding and secund or erect, rather dense and ovate, longest branches 2 in.; pedicels short. *Spikelets* green or variegated, glabrous or hairy and ciliate; rachilla scabrid, internodes $\frac{1}{25}$ in.; gl. I $\frac{1}{7}$ in., lanceolate, acuminate, nerve percurrent or subexcurrent; II $\frac{2}{9}$ in., ovate-lanceolate; flg. gls. up to $\frac{1}{7}$–$\frac{2}{9}$ in., nerves 5, faint; awn slender, up to $\frac{1}{10}$ in.; palea = the gls., linear-oblong, shortly 2-fid, keels ciliolate. *Lodicules* obliquely ovate, sub-2-lobed. *Anthers* $\frac{1}{12}$–$\frac{1}{8}$ in. *Ovary* with rarely 1–2 minute hairs. *Grain* $\frac{1}{7}$ in., linear-oblong, grooved, sometimes adherent to both gl. and palea, hilum nearly equal the grain.—It is impossible to separate the hairy glumed from the glabrous forms; these vary in specimens from different localities, and Clarke has found them growing in the same spot in the Karakoram Mts. To make a comparative analysis of the Indian forms with the European and Oriental would involve a most minute examination of all the latter and lead to the creation of a number of new varieties and subvarieties with ephemeral characters. Most of the Indian specimens fall into Hackel's subsp. *eur. rubra* var. *genuina*, and var. *fallax* (Monogr. Festuc. Europ. 138, 142). The glabrous stoloniferous specimens answer more or less to his subvar. *vulgaris*; those with short erect or ascending innovations to var. *fallax* and mostly to forma *alpestris*, which has thicker leaves and highly variegated spikelets; the pubescent to his subvar. *E. barbata*. The principal synonyms cited by Hackel for these forms are:—F. alpestris, *Wulf. Fl. Nor. Phan. Ed. Fenzl, & Graf*, 151. F. barbata, *Schrank Prim. Fl. Salisb.* 46. F. heterophylla, *Hænke in Jacq. Collect.* ii. 93. F. hirsuta, *Fl. Dan.* t. 1627? (*non Host*). F. Kitaibeliana, *Schult. Mant.* ii. 398 (for var. *genuina*). F. longifolia, *Hegetsch. & Heer Fl. Schw.* 91. F. nigrescens, *Lam. Encycl.* ii. 460. F. pubescens, *Willd. Enum. Pl.* 6. F. repens, *Hegetsch. & Heer l. c.* 92. F. rubra, *var.* baikalensis, *Griseb. in Goett. Nachr.* (1868) 74, is probably this. The true *F. baikalensis* is not found in India.

Var. *Clarkei*, Stapf; extravaginal innovations very rare slender, leaves subsetaceous cauline rarely flat, panicle 3–5 in. nodding, branches few subsecund lowest up to 3 in. rigid or flexuous mostly obliquely erect, spikelets $\frac{1}{2}$ in. pale green, gl. I $\frac{1}{5}$ in., II $\frac{1}{4}$ in., flg. gls. $\frac{1}{4}$–$\frac{3}{10}$ in., awn = $\frac{1}{2}$ to nearly all gl., anthers $\frac{1}{25}$–$\frac{1}{7}$ in., grain $\frac{1}{7}$ in.—Kangra and Dalhousie, alt. 7–8000 ft., *Clarke*. Khasia Hills, alt. 4–6000 ft., *Clarke* (a form with setaceous leaves and very long anthers).

B. Venation of leaves convolute, at length flat or subconvolute $\frac{1}{10}$–$\frac{7}{10}$ in. broad.

* Flowers hermaphrodite; innovations (when known) extravaginal.

† *Flg. gls. awned, awn as long as the gl. or longer, very slender.*

10. **F. gigantea,** *Vill. Hist. Pl. Dauph.* ii. 110; leaves amplexicaul, panicle 4–16 in., branches rather distant undivided to the middle, spikelets about $\frac{1}{2}$ in., flg. gls. $\frac{3}{10}$–$\frac{1}{3}$ in., awn twice as long, anthers linear. *Kunth Enum. Pl.* i. 407, *Suppl.* 339; *Reichb. Ic. Fl. Germ.* t. 358; *Engl. Bot.* t. 1820; *Ledeb. Fl. Ross.* iv. 354, *Boiss. Fl. Orient.* v. 621; *Duthie Grass. N.W. Ind.* 41; *Griseb. in Goett. Nachr.* (1868) 74 (*in part*). F. aristata, *C. Koch in Linnæa*, xxi. (1848) 412. F. triflora, *Sm. Engl. Bot.* t. 1918; *Desf. Fl. Atlant.* 6, t. 20. Bromus giganteus, *Linn. Sp. Pl.* 77; *Fl. Dan.* t. 1630; *Reichb. l. c.* t. 76; *Knapp Gram. Britt.* t. 87; *Host Gram. Austr.* 87, t. 6. B. triflorus, *Linn. Sp. Pl. Ed.* ii. 115; *Fl. Dan.* t. 440.

TEMP. HIMALAYA; from Kashmir to Kumaon, alt. 5–9500 ft.—DISTRIB. Europe, N. Asia.

Rootstock very short, roots fibrous. *Stems* loosely tufted, 2–4 ft., smooth, nodes 3–5. *Leaves* 5–12 by $\frac{1}{5}$–$\frac{1}{2}$ in., linear to linear-lanceolate, finely acuminate, flat, flaccid, dark green, loosely many-nerved, smooth, margins minutely scaberulous; sheaths of innovs. terete, open to the base, smooth or asperulous below the mouth; ligule very short, truncate, glabrous. *Panicle* ovate or oblong-ovate, nodding, branches solitary or the lowermost binate, spreading, flexuous, scabrid; branchlets few-fld. spreading or appressed, pedicels short or the lower sometimes = the spikelet. *Spikelets* linear-lanceolate, pale green, rachilla scabrid; gls. membranous, I $\frac{1}{10}$–$\frac{1}{7}$ in., subulate-lanceolate, 1- or obscurely 3-nerved at the base, margin white-hyaline; II $\frac{1}{5}$ in., lanceolate; flg. gls. $\frac{3}{10}$–$\frac{1}{3}$ in., oblong-lanceolate, acute or tip obscurely 2-fid, margins narrowly hyaline, minutely puberulous below the tip, nerves faint; awn subterminal, straight or flexuous; palea oblong-lanceolate, 2-toothed, keels minutely scaberulous. *Lodicules* large, 2–3-fid. *Anthers* $\frac{1}{10}$–$\frac{1}{7}$ in. *Ovary* quite glabrous. *Grain* $\frac{1}{5}$ in., linear-oblong, tightly adherent to the palea and usually the gl., groove flat; hilum nearly = the grain.

11. **F. leptopogon,** *Stapf*; leaf-base obtuse or rounded, panicle 6–12 in., branches distant dividing from near the base, spikelets $\frac{1}{4}$ in. or rather more, flg. gls. $\frac{1}{4}$–$\frac{1}{3}$ in., tip 2-fid, awn in the sinus = the gl. or rather longer. F. gigantea, *Griseb. in Goett. Nachr.* (1868) 74 (*in part*). Bromus, No. 17 & 18, *Herb. Ind. Or. H.f. & T.*

Sikkim Himalaya, alt. 8–11,000 ft., *J. D. H.* Khasia Hills, alt. 5–6000 ft., *Hook. f. & T.*, *Clarke.*

Rootstock short, slender, roots fibrous. *Stems* 2–4 ft., loosely tufted, nodes 5–6. *Leaves*, sheaths and ligule as in *F. gigantea*, but blade smaller, 4–7 by $\frac{1}{7}$–$\frac{1}{3}$ in., and base not amplexicaul. *Panicle* open or contracted, erect or nodding, branches scabrid; branchlets few, distant, more or less appressed, lateral pedicels very short. *Spikelets* linear-lanceolate, pale green; rachilla scabrid, internodes short; gls. membranous, I $\frac{1}{13}$ in., subulate-lanceolate, margins white-hyaline; II $\frac{1}{8}$ in., lanceolate; flg. gls. scaberulous below the tip, margins narrowly hyaline, nerves faint; palea linear-lanceolate, finely pointed, keels minutely scaberulous. *Lodicules* 2-fid. *Anthers* $\frac{1}{25}$–$\frac{1}{20}$ in., elliptic. *Ovary* with the top minutely hispidulous. *Grain* $\frac{1}{7}$ in., linear-oblong, free or adherent to the base of the palea, groove very shallow, top hispid, hilum = $\frac{2}{3}$ of the grain.

†† *Flg. gls. awnless, mucronate.*

12. **F. asthenica,** *Hook. f.*; stems rather slender, nodes 3, leaves linear narrowed at the base, panicle 5–8 in., branches capillary rough sparingly divided beyond the middle, pedicels capillary, spikelets $\frac{3}{10}$–$\frac{1}{3}$ in. lanceolate 2–4-fld., internodes of rachilla short, flg. gls. ovate-lanceolate acute 3–5-nerved.

Kashmir, alt. 7–9000 ft., *Clarke, Duthie.*

Stem tall, up to 4 ft., smooth, innovations unknown. *Leaves* 6–11 by $\frac{1}{7}$–$\frac{2}{5}$ in. linear, finely acuminate, flaccid, rough, pale green, many-nerved, flat, young convolute; sheaths smooth or the lower scabrid, striate; ligule $\frac{1}{10}$–$\frac{1}{5}$ in., scarious, very obtuse, ciliolate, at length lacerate. *Panicle* more or less contracted, nodding, flexuous; rachis smooth below; lowermost branches up to 3 in., binate. *Spikelets* obovate when open, green; rachilla minutely scaberulous, internodes $\frac{1}{30}$–$\frac{1}{25}$ in.; gls. thinly membranous; I $\frac{1}{8}$–$\frac{1}{7}$ in., subulate-lanceolate, 1-nerved, hyaline except along the percurrent nerve; II $\frac{1}{7}$–$\frac{1}{5}$ in., oblong-lanceolate, acute, 3-nerved; flg. gls. $\frac{1}{5}$ in., ovate-lanceolate, acute, 5-nerved (2 lateral nerves very faint), scaberulous, tip hyaline; palea linear-oblong, minutely 2-toothed, keels slightly scabrid. *Lodicules* obliquely ovate. *Anthers* $\frac{1}{10}$ in., linear. *Ovary* hispidulous on the top. *Grain* $\frac{1}{7}$ in., linear-oblong, dorsally flat and almost so ventrally, slightly adherent to the palea, hilum $\frac{1}{4}$–$\frac{1}{5}$ in. shorter than the grain.

13. **F. modesta,** *Steud. Syn. Gram.* 316; stem tall rather stout, nodes 2–3, leaves of innovations linear finely acuminate, cauline smaller, panicle 6–12 in. loose open, rachis scabrid, lower branches very long binate sparingly divided beyond the middle, lateral pedicels short, spikelets about $\frac{1}{2}$ in. loosely 3–4-fld., internodes of rachilla long, flg. gls. oblong acute 5–7-nerved. *Duthie Grass. N.W. Ind.* 42. F. elatior, *Herb. Strachey & Winterb.* n. 3. Schedonorus modestus, *Nees ex Steud. l. c.*

WESTERN TEMPERATE HIMALAYA, from Jamu to Kumaon, alt. 7–8700 ft., *Royle*, &c.

Stems 4–5 ft., loosely tufted; innovations ascending or stoloniform. *Leaves* of innovs. up to 2 ft. by $\frac{1}{2}$–$\frac{2}{3}$ in., flat, young convolute, rough or almost smooth, subrigid, many-nerved, cauline 4–6 by $\frac{1}{5}$–$\frac{3}{10}$ in.; sheaths open to the base, smooth or the lower rough, strongly striate, at length brown; ligule $\frac{1}{7}$ in., truncate, ciliolate, at length lacerate. *Panicle* ovate, lower branches up to 8 in. *Spikelets* green, open obovate; rachilla scabrid, internodes up to $\frac{1}{10}$ in.; gls. thinly membranous, I $\frac{1}{7}$ in., subulate-lanceolate, hyaline except along the percurrent nerve; II $\frac{1}{5}$ in., oblong-lanceolate, acute, 3-nerved; flg. gls. $\frac{3}{10}$–$\frac{1}{3}$ in., scaberulous, margins narrowly hyaline; palea linear-oblong, 2-dentate, keels scarcely scabrid. *Lodicules* broadly elliptic, very obtuse. *Anthers* $\frac{1}{10}$ in., linear. *Ovary* top hispid, styles terminal.

14. **F. lucida,** *Stapf*; stem tall, nodes 2, leaves linear glaucous, sheaths long loose white, panicle 6–7 in. broadly ovate, branchlets very scabrid, lateral pedicels long, spikelets $\frac{4}{5}$–$\frac{9}{10}$ in. glistening, flg. gls. oblong acute or subobtuse mucronate 5–7-nerved, tips and margins hyaline, white.

WEST HIMALAYA; GARWHAL, Jaunsar, in the Deodar forest, alt. 9000 ft.; *Duthie.*

Stem 2–3 ft., rather stout, smooth; internodes 2, elongate. *Leaves* 6–12 by $\frac{1}{3}$–$\frac{3}{4}$ in., finely acuminate, flat except the involute scaberulous margins, firm, smooth, glaucous, many-nerved; basal sheaths of innovs. very long, cauline tighter pale glaucous; ligule $\frac{2}{5}$–$\frac{3}{5}$ in., white, split to the middle into fine fibres. *Panicle* very lax; branches simple to beyond the middle, rough, lowest 4 in.; lateral pedicels $\frac{1}{3}$–$\frac{1}{2}$ in. *Spikelets* pale green; rachilla scabrid, internodes $\frac{1}{10}$–$\frac{1}{5}$ in.; gl. I $\frac{1}{3}$ in., ovate, acute or subacute, shortly 1-nerved, hyaline except at the base; II similar, $\frac{2}{5}$–$\frac{1}{2}$ in., midrib percurrent, 2 side-nerves very short; flg. gls. $\frac{1}{2}$–$\frac{3}{5}$ in., membranous, pale green, scaberulous, side-nerves prominent; palea linear-oblong, obscurely 2-fid, keels scabrid. *Lodicules* obliquely ovoid. *Anthers* $\frac{1}{3}$ in., linear. *Ovary* with a slightly oblique hispidulous top, styles just below the top.

** Flowers diœcious; innovations intravaginal.

15. **F. sibirica,** *Hack. ex Boiss. Fl. Orient.* v. 626; stem sheathed to the top, leaves linear firm, panicle 3–6 in. ovoid or linear, lower branches simple or divided beyond the middle with 1–4 ovate-oblong 4–6-fld. spikelets, flg. gls. $\frac{1}{5}$–$\frac{1}{3}$ in. ovate or ovate-oblong subobtuse scaberulous, margins subciliolate or denticulate, awnless or tip setiform. F. mutica, *Jacquem. mss.* Schedonorus transparens, *Munro mss.* Poa albida, *Turcz. ex Trin. in Mem. Acad. Petersb. Ser.* VI. i. (1831) 387; *Kunth Enum. Pl.* i. 387. P. pallida, *Jacquem. mss.* Leucopoa sibirica, *Griseb. in Ledeb. Fl. Ross.* iv. 383, *in Goett. Nachr.* (1868) 76.—Festuca, n. 3, *Herb. H.f. & T.*—Schedonorus, n. 2, *Herb. Strachey & Winterb.*

WESTERN TIBET, alt. 13–15,000 ft., from Ladak to N. of Kumaon.—DISTRIB. Caucasus, Altai Mts., Dahuria.

Stems 1–2 ft., tufted, erect, smooth. *Leaves* 6–10 in., rarely more, by $\frac{1}{10}$–$\frac{1}{7}$ in., linear, finely acuminate, smooth or scabrid, subconvolute, dull green, nerves many very prominent, lower cauline one 3 in.; sheaths of innovs. open to the base, terete, basal crowded, cauline smooth; ligule very short, membranous, truncate, ciliate. *Panicle* very narrow or expanded, stiff or flexuous; lower branches solitary or binate, erect or spreading, very variable in length; lateral pedicels very short. *Spikelets* pale green, $\frac{3}{10}$–$\frac{4}{10}$ in., very broad when open; rachilla minutely scabrid, internodes $\frac{1}{40}$ in.; gls. thin, I $\frac{1}{10}$–$\frac{1}{7}$ in., ovate to ovate-lanceolate, subacute, 1-nerved or 3-nerved at the very base, white and hyaline except along the green nerve; II about $\frac{1}{5}$ in., similar, but more oblong and usually distinctly 3-nerved; flg. gls.

5-nerved, tip and margins broadly hyaline; palea oblong acute or sub 2-dentate; keels scabrid. *Lodicules* obliquely ovate, sometimes 2-lobed. *Anthers* $\frac{1}{8}$–$\frac{1}{7}$ in., linear, reduced and empty in the fem. fl. *Ovary* pyriform, top slightly oblique, hispidulous; styles very short, subterminal; stigmas $\frac{1}{5}$ in., plumose, more or less filiform in the male fl. *Grain* $\frac{1}{7}$ in., linear-oblong, quite free, dorsally subconvex, ventrally flat, hilum reaching rather above the middle.

Sect. II. VULPIA. Annuals (the Indian species). *Spikelets* subsecund in spiciform or racemiform panicles; pedicels clavate, often very short. *Glumes* divergent, I minute or 0, II much shorter than the flg., long-awned. *Stamens* 1–3; anthers very short. *Ovary* glabrous. *Grain* linear, adherent to the palea.

16. **F. Myuros,** *Linn. Sp. Pl.* 74; panicle elongate branched below base usually embraced by the upper sheath, pedicels half the length of gl. II or longer, gl. I minute, flg. gls. 5–8 as long as their awns, stamens 1–3. *Host Gram. Austr.* ii. 66, t. 93; *Engl. Bot.* t. 1412; *Knapp Gram. Britt.* t. 70; *Kunth Enum. Pl.* i. 396, *Suppl.* 330; *Ledeb. Fl. Ross.* iv. 349. F. Pseudomyuros, *Soyer Willem. in Ann. Sc. Nat. Ser.* I. vii. (1826) 445. ? F. uniglumis, *Griseb. in Goett. Nachr.* (1868) 73 (*non Soland.*). Vulpia Myuros, *Gmel. Fl. Bad.* i. 215; *Reichb. Ic. Fl. Germ.* i. t. 60; *C. Koch in Linnæa,* xxi. (1848) 409; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 71; *Boiss. Fl. Orient.* v. 628. V. Pseudo-myuros, *Reichb. Fl. Germ. Excurs.* 37. Mygalurus caudatus, *Link Enum. Hort. Berol.* i. 92.

WESTERN HIMALAYA, from Kashmir to Garwhal, alt. 5–9000 ft. WESTERN TIBET, alt. 9–12,000 ft.—DISTRIB. Europe, N. Asia.

Stem 6–18 in., very slender, leafy, glabrous. *Leaves* setaceous, upper with rather tumid grooved sheaths embracing the base of the panicle; ligule short, biauricled. *Panicle* 4–10 in., strict or flexuous, glabrous or puberulous, rachis and branches smooth or scaberulous, lower branches appressed, upper very short. *Spikelets* with the awns $\frac{1}{2}$–$\frac{3}{4}$ in.; rachilla smooth or ciliolate; gls. I and II subulate; flg. smooth or more or less scaberulous, nerves obscure.—I have seen no specimen of *F. uniglumis,* Soland. from India, and suspect Grisebach's plant to be *E. Myuros.*

Sect. III. NARDURUS, Reichb. (Gen.). *Spikelets* spicate, solitary, sessile on the joints of the rachis or with very short flat pedicels. *Glumes* divergent, equal or unequal; flg. gls. awned or not. *Stamens* 3, anthers minute. *Ovary* glabrous. *Grain* oblong or subpyriform, obtuse, ventrally concave, glabrous, adherent to the palea.

17. **F. tenuiflora,** *Schrad. Fl. Germ.* i. 345; leaves very short filiform subflexuous convolute, spike simple, spikelets secund sessile 3–7-fld., gls. I = $\frac{1}{2}$ II linear-subulate acuminate keeled, flg. gls. linear-lanceolate mucronate or shortly awned smooth or hispidulous. *Kunth Enum. Pl.* i. 395, *Suppl.* 330. F. maritima, *Linn. Sp. Pl.* 75. Nardurus tenuiflorus, *Boiss. Voy. Bot. Espan.* ii. 667, *Fl. Orient.* v. 632. N. unilateralis, *Fries ex Linnæa,* xxix. (1857-8) 730; *Fourn. in Bull. Soc. Bot. Fr.* xiii. (1866) 181. Catapodium unilaterale, *Griseb. in Ledeb. Fl. Ross.* iv. 347. Triticum hispanicum, *Willd. Sp. Pl.* i. 479. T. maritimum, *Willd. l.c.* (*in Syn.*). T. Nardus, *DC. Fl. Franc.* iii. 87. T. tenellum, *Viv. Ann. Bot.* i. II. 154; *Host Gram. Austr.* ii. 20, t. 86 (*excl. Syn.*). T. unilaterale, *Linn. Mant.* i. 35. Brachypodium tenuiflorum & tenellum, *Roem. & Sch. Syst.* ii. 745 (*ex Kunth*).

KASHMIR; near Sirinagur, alt. 5–6000 ft., *Duthie.*—DISTRIB. Westwd. to Spain.

Stems 3–16 in., tufted, slender, wiry erect, strict or curved, smooth. *Leaves*

1–3 in., erect, sometimes almost capillary, grooved between the prominent ribs, ligule 0. *Spike* 2–4 in., short or curved, rachis smooth, wiry, grooved, $\frac{1}{2}$– terete, with a shallow groove opposite the spikelets. *Spikelets* $\frac{1}{8}$–$\frac{1}{6}$ in., green; fl. gls. rigid, terete, nerves indistinct. *Lodicules* subcuneate, acutely 2-lobed.

DOUBTFUL SPECIES.

F. filiformis, *Nees ex Duthie Grass. N.W. Ind.* 42 is probably a *Tripogon.*

122. **BROMUS**, *Linn.* (O. Stapf).

Annual or perennial grasses. *Leaves* narrow, usually flat. *Spikelets* many-fld., panicled, laterally compressed; uppermost fls. usually imperfect; rachilla jointed below the flg. gls., not produced beyond the uppermost gl. *Glumes* many, I and II unequal, empty, acuminate, 1–5-nerved, persistent, flg. gls. acuminate or shortly cleft; 1- very rarely 3-awned, median awn erect or recurved sometimes twisted towards the base; palea 2-fid or 2-toothed, keels scabrid or ciliate. *Lodicules* 2, oblong or lanceolate, entire or cleft. *Stamens* 3. *Ovary* oblong or cuneiform, crown more or less enlarged and hairy or villous. *Styles* usually inserted ventrally below the tip of the ovary, short; stigmas plumose. *Grain* linear-oblong, usually concavo-convex and adherent to the palea.—Species about 40, natives of temp. regions.

B. unioloides, H. B. K. (*B. Schraderi*, Kunth; Duthie Grass. N.W. Ind. 43; Fodd. Grass. N. Ind. 67), a tall American species with many-nerved keeled gls. has been introduced into India as a fodder grass, and has been found at Darjiling and elsewhere as an escape.

Sect. I. FESTUCOIDES, *Coss. & Dur.* Perennial, usually tall. Gl. I 1-nerved; II 3-nerved; flg. gls. 5–7-nerved; awn terminal or nearly so or 0.

1. **B. inermis**, *Leyss. Fl. Hall.* 16; rootstock creeping, panicle large, spikelets up to 2 in., awn of flg. gls. minute or 0. *Poll. Hist. Pl. Palat.* i. 111; *Schreb. Beschr. Graes.* i. 97, t. 13; *Host Gram. Austr.* i. 8, t. 9; *Kunth Enum. Pl.* i. 412, *Suppl.* 340; *Ledeb. Fl. Ross.* iv. 357; *Steud. Syn. Gram.* 321; *Boiss. Fl. Orient.* v. 642. B. littoreus, *Georgi Beschr. Russ. Reich. Nachtr.* 257; *Griseb. in Goett. Nachr.* (1868) 74; *Duthie Grass. N.W. Ind.* 43. B. purpurascens, *Turcz. ex Ledeb. l. c.* ?B. variegatus, *Griseb. l. c.* (*non Bieb.*). Schedonorus inermis, *Beauv. Agrost.* 99. Festuca inermis, *DC. Fl. Fr.* iii. 49; *Reichb. Ic. Fl. Germ.* t. 70. F. Leysseri, *Moench Enum. Pl. Hass.* 41. F. poæoides, *Thuill. Fl. Paris, Ed.* II. 51. F. poaeformis, *Pers. Syn.* ii. 94. F. speciosa, *Schreb. Spicil. Fl. Lips.* 59. Tragus inermis, *Panz. in Denkschr. Akad. Muench.* (1813) 296.

WESTERN HIMALAYA; from Kashmir to Kumaon, alt. 9–13,000 ft.—DISTRIB. N. Europe, Reg. Caucas., N. Asia.

Stem 2–4 ft., often stoloniferous, nodes usually pubescent. *Leaves* 6–9 by $\frac{1}{4}$–$\frac{1}{3}$ in., finely acuminate, glabrous or hairy above, smooth or scaberulous beneath, many-nerved; sheaths tight, striate; ligule very short, truncate, toothed. *Panicle* 6–8 in., open or contracted, erect or nodding, rachis smooth; lower branches 2–5 in., 3–4-nate, simple or sparingly divided. *Spikelets* pale green, rarely purplish, linear-oblong, loosely 5–12-fld., rachilla pubescent; gl. I $\frac{1}{4}$–$\frac{1}{3}$ in., lanceolate, keeled; II $\frac{1}{3}$–$\frac{2}{5}$ in., oblong-lanceolate, subacute; flg. gls. $\frac{1}{3}$–$\frac{1}{2}$ in., oblong-lanceolate, obtuse, 5- sub 7-nerved, glabrous or nearly so, tip and upper margins scarious; awn up to $\frac{1}{6}$ in.; keels of palea rigidly ciliolate. *Anthers* $\frac{1}{6}$–$\frac{1}{5}$ in. *Grain* $\frac{3}{10}$–$\frac{1}{3}$ in., oblong, more or less folded.—*B. inermis* in N.E. Asia passes into *B. ciliatus*, L., a characteristic form in N. America where *B. inermis* is absent.

Var. *villosus*, Mert. & Koch in Röhl. Deutsch. Flor. i. 675; spikelets pubescent to villous, lower sheaths and leaves more or less hairy.—Kashmir and Gilgit. Europe.

Var. *confinis*, Stapf; stem 1½–2½ ft., leaves hardly ⅕ in. broad hairy, panicle usually reduced to a raceme, spikelets densely pubescent. B. confinis, *Nees ex Steud. Syn. Gram.* 320; *Duthie l. c.* 42. B. pubescens, *Jacquem. mss.* B. Munroi, *Boiss. Fl. Or.* v. 643.—Kunawur and Gilgit.

2. **B. asper**, *Murray Prodr. Stirp. Gotting.* 42; rootstock short præmorse, panicle large, spikelets up to 1½ in., awn of flg. gls. ½ to nearly as long as the gl. straight. *Host Gram. Austr.* i. 6, t. 7; *Engl. Bot.* t. 1172; *Reichb. Ic. Fl. Germ.* t. 76; *Steud. Syn. Gram.* 320; *Ledeb. Fl. Ross.* iv. 356; *Boiss. Fl. Orient.* v. 643; *Griseb. in Goett. Nachr.* (1868) 64; *Duthie Grass. N. W. Ind.* 42. B. altissimus, *Weber in Wigg Prim. Fl. Holsat.* 9 (*non Pursh.*). B. dumetorum, *Lamk. Fl. Fr.* iii. 605. B. giganteus, *Vill. Hist. Pl. Dauph.* ii. 118 (*non Linn.*). B. hirsutissimus, *Cyrill. ex Roem. & Sch. Syst.* ii. 643; B. hirsutus, *Curt. Fl. Lond. fasc.* ii. t. 8 (*non Schrank.*). B. montanus, *Scop. Fl. Carn. Ed.* II. i. 82. B. nemoralis, *Huds. Fl. Angl. Ed.* II. i. 51. B. nemorosus, *Vill. l. c.* 218. B. Pseudo-asper, *Schur. Enum. Pl. Transs.* 804. B. ramosus, *Huds. Fl. Angl.* 40 (*non Linn.*). B. serotinus, *Benek. in Bot. Zeit.* iii. (1845) 724; *Steud. l. c.* Festuca aspera, *Mert. & Koch in Roehl. Deutsch. Flor.* i. 672. F. scaberrima & Wightiana, *Steud. l. c.* 316. Schedonorus asper, *Gaud. ex Roem. & Sch. l. c.* S. Benekeni, *Lange in Fl. Dan.* t. 2826. S. serotinus, *Rostoup in Kjoeb. Vidensk. Meddel.* (1864) 119. S. bromoides, *Wight & Ann. in Wight Cat.* n. 1795.—Bromus, n. 10 (*partim*), *Herb. Ind. Or. Hf. & T.*

TEMPERATE HIMALAYA, alt. 6–11,000 ft., from Kashmir to Sikkim. KHASIA HILLS, alt. 5000 ft., *J. D. H.* and *T. T.*, *Clarke*. NILGHIRI and PULNEY HILLS, *Wight*; alt. 7000 ft., *Clarke*.—DISTRIB. Europe, N. Afr., W. and N. Asia.

Stems 2–6 ft., erect, smooth. *Leaves* 1–1½ ft. by ⅛–½ in., finely acuminate, flaccid, hairy above, beneath and margins scabrid, nerves many; sheaths villous or retrorsely hirsute, upper glabrous; ligule short, obtuse, ciliolate. *Panicle* up to 1 ft., loose, open or contracted, rachis rough or smooth below; branches 2-nate or lower 3–5-nate and unequal up to 7 in., spreading or deflexed, naked below. *Spikelets* linear to oblong, green, loosely 7–9-fld.; gls. rather firm; rachilla scabrid; gl. I ⅙–⅓ in., linear-lanceolate; II ¼– nearly ½ in., broader, more oblong; III ⅓– nearly ½ in., oblong-lanceolate, keeled below the tip, glabrous pubescent scabrid or side nerves, scabrid to ciliate. 5–7-nerved, tip and margin more or less hyaline; awn terminal or subterminal; palea obtuse, keels rigidly ciliate. *Anthers* $\frac{1}{12}$–⅛ in., linear. *Grain* ⅓ in., linear-oblong, flat tightly-adherent to the gl. and palea.—The Sikkim, Khasia and some Nilghiri specimens have more acute and strongly nerved gls. than most of the N.-Western ones; but they are linked by many intermediates, and similar variations occur all over Europe.

3. **B. himalaicus**, *Stapf*; rootstock very short, panicle usually reduced to a raceme, spikelets up to 1 in., awn of flg. gl. as long as the gl. or longer recurved. B. asper, & Bromus n. 9 & 10 (*partim*), *Herb. Ind. Or. Hf. & T.*

TEMPERATE HIMALAYA; E. Nepal, Sikkim and W. Bhotan, &c., alt. 8–12,000 ft., *J. D. H.*

Stems 2–2½ ft. *Leaves* 6–9 by ⅛–¼ in., finely acuminate, flaccid, hairy above, beneath and margins scabrid, many-nerved; sheaths tight, glabrous or lowest hairy when young; ligule short, truncate, usually dark-colrd. *Panicle* 5–7 in., open or contracted; rachis rough, or smooth below; branches 2-nate, or the lower 3–5-nate, spreading or deflexed, unequal, lowest up to 3 in., simple or sparingly divided. *Spikelets* linear-oblong, green, loosely 9-fld.; rachilla subscaberulous; gl. I ⅕–$\frac{3}{10}$ in., narrowly lanceolate, 1-nerved, keeled; II longer ($\frac{3}{10}$–⅓in.) and broader;

III broader and thinner than in *B. asper,* glabrous pubescent or rigidly hairy towards the margins, 5–7-nerved, scarcely keeled below the tip, tip and margins hardly hyaline; callus large; palea obtuse, keels rigidly ciliate. *Anthers* linear-oblong, $\frac{1}{20}$–$\frac{1}{12}$ in. *Grain* $\frac{1}{5}$ in., linear-oblong, plano-convex, adherent to the gl. and palea.

Var. *grandis,* Stapf; branches of panicle almost all simple and bearing a solitary villous spikelet, gls. larger. B. confinis, *Herb. Strach. & Winterb.* —Kumaon and Sikkim, alt. 11–12,000 ft.

Sect. II. STENOBROMUS, *Griseb.* Annuals. *Gl.* I 1- rarely 3-nerved; II 3–5-nerved; flg. gls. 5–7-nerved; internodes of rachilla slender.

4. **B. crinitus,** *Boiss. & Hoh. in Boiss. Diagn. Ser.* I. xiii. 64, *Fl. Orient.* iii. 647; panicle rather stiff, spikelets $\frac{1}{4}$ in. elliptic-oblong, flg. gls. clavate not imbricating. *Steud. Syn. Gram.* 320; *Griseb. in Goett. Nachr.* (1868) 74. B. gracillimus, *Bunge in Mem. Sav. Etr. Petersb.* vii. (1851) 527; *Duthie Grass. N.W. Ind.* 42. Deschampsia aralensis, *Regel in Bull. Soc. Nat. Mosc.* xli. (1868) II. 300.

WESTERN TIBET; alt. 10–14,000 ft.; Baltistan, &c., *Thomson, Duthie.* Zanskar; *Schlagintweit.* BRITISH BELUCHISTAN, alt. 4–5000 ft., *Duthie.*—DISTRIB. Westwd. to Persia, Turkestan.

Stem 6–18 in., erect, slender, smooth. *Leaves* $1\frac{1}{2}$–$3\frac{1}{2}$ by $\frac{1}{12}$–$\frac{1}{10}$ in., linear, flaccid, pilose or velvety; sheaths velvety; ligule ovate, lacerate. *Panicle* up to 4 in., oblong, erect or subnutant, rachis smooth; branches 3–5-nate, capillary, suberect or spreading, up to 2 in. *Spikelets* 3–6-fld., pale green; rachilla scabrid; gl. I $\frac{1}{7}$ in., lanceolate, acute, hyaline except along the middle; II $\frac{1}{6}$–$\frac{1}{5}$ in., broadly lanceolate, tip and margins hyaline; flg. gls. $\frac{1}{6}$ in., oblong, obtuse, strongly involute, ciliate on or near the margin, faintly 5-nerved; awn $\frac{2}{3}$ in., capillary, straight, terminal or nearly so; keels of palea ciliate. *Anthers* $\frac{1}{8}$–$\frac{1}{7}$ in. *Grain* $\frac{1}{8}$ in., linear-oblong, laterally compressed and folded; hilum as long as the grain.

5. **B. tectorum,** *Linn. Sp. Pl.* 77; panicle flaccid nodding often secund, spikelets $\frac{1}{2}$–1 in. cuneiform, flg. gls. long narrow. *Host Gram. Austr.* i. 13, t. 15; *Sibth. Fl. Græc.* i. t. 82; *Fl. Dan.* t. 1806; *Reichb. Ic. Fl. Germ.* t. 73; *Ledeb. Fl. Ross.* iv. t. 359; *Kunth Enum. Pl.* i. 419, *Suppl.* 344; *Boiss. Fl. Orient.* v. 647; *Steud. Syn. Gram.* 318; *Griseb. in Goett. Nachr.* (1868) 74; *Duthie Grass. N.W. Ind.* 43. B. abortiflorus, *St. Amans. Fl. Agen.* 44; *Steud. l. c.* B. arenaceus, *Pourr. in Mem. Acad. Toul.* iii. (1788) 308. B. lateripronus, *St. Laz. in Ann. Soc. Bot. Lyon.* vii. (1880) 121. ?B. scabrifolius, *Opiz. Natural.* n. 9 (1825) 119. B. tectorius, *Dulac Fl. Haut. Pyren.* 96. Anisantha pontica, *C. Koch in Linnæa,* xxi. (1848) 394; *Steud. l. c.* 377.

WESTERN HIMALAYA, from Gilgit to Kumaon, alt. 7–11,000 ft.; Baltistan, *Duthie.*—DISTRIB. Europe, N. Africa, N. and W. Asia.

Stems 6–18 in., erect or ascending, glabrous or pubescent. *Leaves* up to 3 by $\frac{1}{8}$ in., linear, acute, flaccid, hairy; sheaths hairy, rarely glabrous; ligule ovate, lacerate. *Panicle* up to 5 in., flaccid; rachis smooth or nearly so; branches 3–6-nate, capillary, flexuous, often decurved with erect tips, sparingly divided. *Spikelets* green, loosely few- many-fld., rachilla scabrid; gl. 1 $\frac{1}{5}$–$\frac{1}{3}$ in., lanceolate, acute, 1- rarely 3-nerved, tip and margins hyaline; II $\frac{1}{3}$–$\frac{1}{2}$ in., oblong-lanceolate, 3–5-nerved; flg. gls. $\frac{1}{2}$– nearly $\frac{2}{3}$ in., thin, oblong-lanceolate, acutely 2-fid, 5–7-nerved, puberulous or scabrid above or all over, tip and margins hyaline; awn $\frac{1}{3}$–$\frac{3}{4}$ in., from the tip or below it, straight or slightly recurved; keel of palea long and loosely ciliate. *Anthers* $\frac{1}{25}$ in. *Grain* $\frac{1}{3}$–$\frac{2}{5}$ in., linear-oblong, dorsally compressed, ventrally concave or folded.—The form with a solitary flg. gl. (*B. abortiflorus,* St. Amans) may be expected to occur in N. India.

Sect. III. Serrafalcus, *Parl.* (Gen.) Annuals. *Gl.* I 3–5- rarely 1-nerved; II 5–9-nerved; flg. gls. 7–9-nerved; internodes of rachilla clavate above.

* *Flg. gls. all 1-awned. Panicle compact, rarely loose, branches short.*

6. **B. scoparius,** *Linn. Cent. Pl.* i. 6, *Sp. Pl.* 76; panicle very compact oblong to obovate, spikelets densely fascicled about $\frac{1}{3}$–$\frac{1}{2}$ in., flg. gls. oblong obtuse, awn = the gl. at length spreading. *Kunth Enum. Pl.* i. 420; *Bory Exped. Morée*, t. 5; *Steud. Syn. Gram.* 318; *Boiss. Fl. Orient.* v. 650. B. confertus, *Bieb. Fl. Taur. Cauc.* i. 71; *Steud. l. c.* 324; *Duthie Grass. N.W. Ind.* 42. B. chrysopogon, *Viv. Fl. Lyb. Spec.* 4, t. 2; *Steud. l. c.* 327. B. erectus, *Moris Stirp. Sard. Elench.* i. 50 (*non Huds.*). B. humilis, *Cav. Ic.* vi. 65, t 589. ?B. rubens, *Cav. l. c.* t. 45 (*non Linn.*). Serrafalcus scoparius, *Parl. Fl. Ital.* i. 19. S. Cavanillesii, *Willk. & Lange Prodr. Fl. Hisp.* i. 101.

Kashmir, alt. 5–6000 ft., *Falconer, Duthie.*—Distrib. Reg. Mediterr., Oriens.

Annual. *Stems* $\frac{1}{4}$–1$\frac{1}{2}$ ft., erect, slender, glabrous. *Leaves* 2–3$\frac{1}{2}$ in. by $\frac{1}{6}$ in., linear, acute, hairs scattered stiff; sheaths tight, glabrous, mouth hairy; ligule short, truncate, toothed. *Panicle* 1–1$\frac{3}{4}$ in., erect, compact; rachis smooth; branches solitary or binate, short, crowded, scaberulous. *Spikelets* $\frac{1}{10}$–$\frac{1}{7}$ in. broad, pale green, densely 5–8-fld., rachilla scaberulous; glumes glabrous or hairy, nerves strong; gl. I $\frac{1}{7}$ in., ovate-lanceolate, acute or subacute, 3–5-nerved; II $\frac{1}{4}$ in., 5–7-nerved; flg. gls. $\frac{1}{4}$ in., minutely 2-fid, 7- sub 9-nerved; awn slender; keels of obtuse palea loosely long-ciliate. *Anthers* $\frac{1}{50}$–$\frac{1}{40}$ in. *Grain* $\frac{1}{50}$ in., linear-oblong, flatly concavo-convex or folded.

7. **B. mollis**, *Linn. Sp. Pl. Ed.* II. 112; panicle compact or loose but contracted ovate to oblong branches distinct, spikelets $\frac{1}{2}$–$\frac{3}{4}$ in. ovate-oblong or elliptic, awn about as long as the gl. straight. *Host Gram. Austr.* i. 16, t. 19; *Fl. Dan.* t. 1324; *Engl. Bot.* t. 1078; *Knapp Gram. Britt.* t. 77; *Reichb. Ic. Fl. Germ.* t. 74; *Schreb. Beschr. Gram.* t. 6, f. 1; *Kunth Enum. Pl.* i. t. 413, *Suppl.* 340; *Steud. Syn. Gram.* 323; *Ledeb. Fl. Ross.* iv. 361; *Steud. Syn. Gram.* 323; *Boiss. Fl. Orient.* v. 653; *Duthie Grass. N.W. Ind.* (*Royle's plant only*) B. arenarius, *Thomine Desm. in Mem. Soc. Linn. Calv.* (1824) 40 (*non Labill.*). B. atticus, *Steud. ex Nym. Consp.* 823; *Syn. Gram.* 321. B. compactus, *Hort. ex Steud. Nom. Ed.* II. ii. 227. B. Ferronii, *Mabelli in Act. Soc. Linn. Bord.* xxv. (1864) 613. B. glomeratus, *Tausch in Flora*, xx. (1837) 125 (*ex Boiss.*); *Steud. l. c.* 328. B. hordeaceus, *Linn. Sp. Pl.* 77. B. nanus, *Weig. Obs.* 8. B. patulus, *Duthie Grass. N.W. Ind.* 42 (*in part*). B. simplicissimus, *Cesati ex Nym. l. c.* Serrafalcus mollis, *Parl. Rar. Pl. Sic.* ii. 16. S. Thomini, *Hard. in Congr. Sc. Fr. Septr.* I. (1833) 59.

North-West India, *Herb. Royle* (Introd. ?).—Distrib. Europe, N. Afr., As. Min.

Annual. *Stems* $\frac{1}{2}$–3 ft., erect or ascending, villous to glabrous. *Leaves* 1$\frac{1}{2}$–4 in., linear, acute, flaccid, subhirsute above, pubescent beneath; sheaths velvety or softly hairy; ligule very short, denticulate, glabrous or hairy. *Panicle* 1–6 in., erect, rachis hairy; branches 3–6-nate, scabrid or softly pubescent. *Spikelets* $\frac{1}{5}$–$\frac{1}{4}$ in. broad, pale green, densely 5–12-fld., rachilla scaberulous; gls. broad, hairy to velvety, rarely glabrescent, nerves strong, tips and margins scarious; I $\frac{1}{4}$–$\frac{3}{10}$ in., ovate-lanceolate, acute or mucronate, 5-nerved, midrib percurrent; II $\frac{1}{3}$ in., elliptic-oblong, 7–9-nerved; flg. gls. $\frac{3}{10}$–$\frac{1}{3}$ in., broadly subobovate, obtuse, shortly 2-lobed, 7-nerved; awn subterminal as long or rather shorter than the gl.; palea obtusely

2-lobed, keels loosely long-ciliate. *Anthers* $\frac{1}{7}$ in., oblong. *Grain* $\frac{1}{5}$–$\frac{1}{4}$ in., linear-oblong, flatly concavo-convex or folded, tightly adherent to the gl. and palea.

** *Flg. gls. all* 1-*awned, or some* 3-*awned in B. macrostachys. Panicle loose, open or contracted.*

8. **B. patulus**, *Mert. & Koch in Röhl. Deutsch. Flor.* i. 685; panicle linear-oblong usually nodding often secund branches long slender up to 6 in., spikelets $\frac{3}{4}$–1$\frac{1}{2}$ in. linear-oblong, awn about = the gl. usually recurved. *Kunth Enum. Pl.* i. 415; *Reichb. Ic. Fl. Germ.* t. 74; *Ledeb. Fl. Ross.* iv. 364; *Boiss. Fl. Orient.* v. 655; *Steud. Syn. Gram.* 325; *Griseb. in Goett. Nachr.* (1868) 74; *Duthie Grass. N.W. Ind.* 43. B. annuus, *Herb. Jacquem.* B. anatolicus, *Boiss. et Heldr. in Boiss. Diagn. Ser.* I. xiii. 63. B. arvensis, *Duthie l.c.* 42 (*non Linn.*); *Herb. Ind. Or. Hf. & T.* B. chapprianus, *De Not. ex Nym. Consp.* 824. B. commutatus, *M. Bieb. Fl. Taur. Cauc.* iii. 77 (*non Mert. & Koch.*). B. Cyri, *C. A. Mey. Verz Pfl. Cauc.* 24. B. japonicus, *Thunb. Fl. Jap.* 51, t. 11; *Franch. & Sav. Enum. Pl. Japon.* ii. 181 (*nom. prius*). B. Kochii, *C. Gmel. Fl. Bad.* iv. 76, t. 6. B. mollis, *Duthie l. c.* B. multiflorus, *Host Gram. Austr.* i. (*excl. exempl. Royle*) t. 11 (*nom Sm.*). B. pendulus, *Schk. in Verh. Siebend. Ver. Naturn.* iv. (1853) 90. B. phrygius, *Boiss. Diagn. Ser* II. iv. 140. B. polymorphus, *Hoh. Enum. Pl. Talusch.* 19. B. secalinus, *M. Bieb. l. c.* i. 71 (*non Linn*). B. squarrosus, *Herb. Royle*; *Herb. Strach. & Winterb.* (Bromus, n. 3); *Duthie l. c.* (*non Linn.*). B. unilateralis, *Schur. l. c.* B. velutinus, *Nocc. et Balb. Fl. Tic.* i. 54 (*non Schrad.*). B. villiferus, *Steud. Syn. Gram.* 326 (*in part*). Serrafalcus patulus, *Parl. Fl. Ital.* i. 394.

Western Himalaya, alt. 6–14,000 ft. Bhotan, *Griffith.*—Distrib. Europe, W. and N. Asia, China, Japan.

Annual. *Stems* 1–2 ft., erect or ascending, glabrous or puberulous. *Leaves* up to 8 by $\frac{1}{4}$ in., linear, acute or subacute, green, flaccid, hairy especially above; sheaths rarely all glabrous or hairy; ligule short, ovate, toothed. *Panicle* up to 8 in., narrow or open; rachis glabrous or pubescent; branches solitary or 3–7-nate, unequal, 1–4-spiculate, slender, flexuous, lower up to 6 in. long, simple or racemose, suberect spreading or nodding, scabrid at least above. *Spikelets* densely or loosely 7–14-fld., pale green; rachilla scabrid; gls. rather narrow, thin between the prominent nerves; I $\frac{1}{5}$–$\frac{1}{4}$ in., lanceolate, subacute, pubescent or scabrid, 3-nerved, tips and upper margins hyaline, II $\frac{3}{10}$–$\frac{1}{3}$ in., oblong-lanceolate, 7-nerved; flg. gls. $\frac{1}{8}$–$\frac{1}{7}$ in., elliptic-oblong or -lanceolate, subacute or obtuse, 2-toothed, margins inflexed from the middle or above it; awn $\frac{1}{10}$–$\frac{1}{7}$ in., infra-apical, base rather stout, not or obscurely twisted; keels of palea loosely long-ciliate. *Anthers* $\frac{1}{25}$–$\frac{1}{22}$ in. *Grain* $\frac{1}{5}$–$\frac{2}{7}$ in., linear-oblong, more or less concavo-convex, tightly adherent to the gl. and palea.—Griffiths' Bhotan specimen is a solitary one, probably introduced. The following are rather abnormal forms than varieties.

Var. *Falconeri*, Stapf; panicle very loose villous, gl. I narrowly lanceolate 1-nerved, II 5-nerved, flg. gls. 7-nerved.—B. tomentellus, *Duthie l. c.* 43 (*non Boiss.*).—N.W. India, *Falconer.*

Var. *microstachya*, Stapf.; spikelets small few-fld., gls. broader, I $\frac{1}{7}$ in. 3–5-nerved, II $\frac{1}{4}$ in. 7–9-nerved, flg. gls. $\frac{1}{4}$–$\frac{3}{10}$ by $\frac{1}{8}$ in. broad.—N.W. India, *Falconer.*

9. **B. oxyodon,** *Schrenk Enum. Pl. Nov.* ii. 1; panicle usually stiff suberect oblong contracted, branches up to 2 in., spikelets 1$\frac{1}{2}$ in. linear or linear-oblong, flg. gls. broadly hyaline, awn $\frac{3}{4}$–1 in. *Steud. Syn. Gram.* 326. B. macrostachys, *var.* oxyodon, *Griseb. in Ledeb. Fl. Ross.* iv. 363. B. multiflorus, *Kar. & Kiril. in Bull. Soc. Nat. Mosc.* (1841) 865.

Kashmir, Dras, Baltistan, Zanskar, &c., alt. 9–12,000 ft., *Thomson*, &c.——Distrib.—Turkestan.

Annual. *Stems* 6–18 in., erect or ascending, pubescent or subvelutinous. *Leaves* 2–5 in., linear, narrow, subacute, hairy or velvety; young sheaths villous; ligule ovate, lacerate. *Panicle* up to 5 in., usually contracted, erect, rachis pubescent; branches 2–5-nate, unequal, suberect, rarely nodding, scabrid, simple 1–3-spiculate. *Spikelets* pale green, densely 5–10-fld.; rachilla puberulous; gls. rather narrow, glistening, scabrid with appressed hairs, tips long-hyaline, nerves prominent; I $\frac{1}{3}$–$\frac{2}{5}$ in., lanceolate, 1–3-nerved; II $\frac{9}{20}$–$\frac{11}{20}$ in., oblong-lanceolate, 5-nerved; flg. gls. $\frac{1}{2}$–$\frac{3}{4}$ by $\frac{1}{8}$–$\frac{1}{7}$ in., oblong-lanceolate, margins inflexed below the middle, subacute, 2-toothed, 7–9-nerved; awn $\frac{3}{4}$–1 in., infra-apical, nearly straight or moderately recurved; keels of palea loosely long-ciliate. *Anthers* $\frac{3}{10}$–$\frac{2}{5}$ in. *Grain* $\frac{3}{10}$–$\frac{1}{3}$ in., linear-oblong, slightly concavo-convex.

10. **B. macrostachys,** *Desf. Fl. Atlant.* i. 96, t. 19, f. 2, *var.* triaristatus, *Hack. in Flora* (1879); panicle oblong or obovate-oblong loose or contracted, spikelets 1$\frac{1}{2}$–1$\frac{3}{4}$ in. elliptic to linear-oblong, flg. gls. all or the upper only with 2 straight slender lateral awns, median awn $\frac{1}{2}$–$\frac{3}{4}$ in. finally twisted and strongly recurved. B. Danthoniæ, *Trin. in C. A. Mey. Verz. Pfl. Cauc.* 24; *Sp. Gram. Ic.* t. 353; *Duthie Grass. N.W. Ind.* 43. Boissiera Danthoniæ, *A. Br. Ind. Sem. Hort. Berol.* (1857) 3. Triniusa Danthoniæ, *Steud. Syn. Gram.* 328.

WESTERN TIBET; Spiti, alt. 12,000 ft., *Lance.*—DISTRIB. Affghan., Turkestan, As. Min. (of *B. macrostachys*, Mediterranean regions, Persia).

Annual. *Stem* 6–18 in., erect or ascending, glabrous or pubescent. *Leaves* 2–6 in., narrowly linear, acute or subacute, more or less hairy or velvety; young sheaths villous or velvety; ligule ovate, lacerate. *Panicle* up to 5 in., sometimes reduced to a spikelet, rachis glabrous or pubescent; branches solitary or the lower 3–4-nate, unequal, rarely 1 in., simple, 1–2-spiculate, strict, suberect, scabrid, rarely flexuous. *Spikelets* pale green, densely 6–20-fld.; rachilla pubescent; gls. broad, villous velvety or scabrid, tips and margins usually scarious and dull white, nerves prominent or not; gl. I $\frac{1}{5}$–$\frac{3}{10}$ in.; broadly lanceolate, 5-nerved; II about $\frac{1}{3}$ in., oblong, 7–9-nerved; flg. gls. $\frac{2}{5}$– nearly $\frac{1}{2}$ in., elliptic to obovate-oblong, subacute, 2-toothed, 9–11-nerved, margins inflexed from or from above the middle; lateral awns $\frac{1}{8}$–$\frac{1}{6}$ in, median $\frac{1}{2}$–$\frac{3}{4}$ in., infra-apical, often purplish, base stout; keels of palea long-ciliate. *Anthers* nearly $\frac{1}{2}$–$\frac{3}{5}$ in., rarely $\frac{9}{10}$ in. *Grain* $\frac{3}{10}$–$\frac{1}{3}$ in., linear-oblong, slightly concavo-convex, tightly adherent to the gl, and palea; hilum almost as long as the gl.

DOUBTFUL SPECIES.

B. MEMBRANACEUS, *Jacquem. mss.*; *Griseb. in Goett. Nachr.* (1868) 74 *Duthie Grass. N.W. Ind.* 43 is Duthiaea bromoides, *Hack.* (see p. 282).

123. DUTHIEA, *Hack.* See p. 282.

124. BRACHYPODIUM, *Beauv.*

Perennial slender grasses. *Leaves* flat or convolute. *Spikelets* terete, many-fld., subsessile or in a long slender spike appressed to the rachis; rachilla elongate and jointed below the fl. gls. *Glumes* many, imbricate in fl., spreading in frt.; I and II persistent; empty, narrow; flg. gls. oblong-lanceolate, acuminate, with a terminal straight awn or mucro, 7–9-nerved; keels of palea pectinately ciliate. *Lodicules* ciliate. *Stamens* 2–3, anthers linear. *Ovary* and *grain* as in Bromus.—Species 5 or 6, of north temp. and mt. regions.

1. **B. sylvaticum,** *Beauv. Agrost.* 101; roots fibrous, leaves more or less hairy or scaberulous flat, spike drooping, awn as long as its gl. *Thw. Enum. Pl. Zeyl.* 374; *Trim. Cat. Ceyl. Pl.* 110; *Ledeb. Fl. Ross.* iv. 346;

Boiss. Fl. Orient. v. 657. B. Fontanesianum, *Nees Fl. Afr. Austr.* 457. B. Fontanesii, *Nees in Herb. Ind. Or. Hohenack.* n. 914. B. gracile, *Beauv. l. c.*; *Reichb. Ic. Fl. Germ.* t. 16. B. nepalense, *Nees ex Steud. Syn. Gram.* 316. B. scaberrimum, *Wight & Arn. in Wight Cat.* n. 1796; *Steud. Nomencl. Ed.* II. i. 221. Bromus silvaticus, *Pollich Hist Pl. Palat.* i. 118; *Host Gram. Austr.* i. 17, t. 21; *Engl. Bot.* t. 729. B. dumosus, *Vill. Hist. Pl. Dauph.* ii. 119. B. gracilis, *Weig. Obs.* 15, t. 1, f. 11. B. pinnatus, *Fl. Dan.* t. 164 (*non Beauv*). Festuca gracilis, *Moench Meth.* 191. F. sylvatica, *Huds. Fl. Angl. Ed.* I. 38; *Knapp Gram. Britt.* t. 76; *Steud. Syn. Gram.* 316. Triticum sylvaticum, *Moench Enum. Pl. Hass.* 54; *Kunth Enum. Pl.* i. 445. T. gracile, *Brot. Fl. Lusit.* 121. T. scaberrimum, *Steud. Nom. l.c.* 717. Tragus gracilis, *Panz. in Denkschr. Akad. Muench.* (1813) 296.—Festuca, *Wall. Cat.* n. 3800.

TEMPERATE HIMALAYA, alt. 6–12,000 ft., from Kashmir to Sikkim. The KHASIA and NAGA HILLS, alt. 4–6000 ft., *Clarke*, &c. NILGHIRI HILLS, alt. 6000 ft., *Wight*, &c.—CEYLON, alt. 8000 ft., *Walker*, &c.—DISTRIB. Europe, N. Asia, S. Africa.

Stem 2–4 ft., very slender, simple or branched. *Leaves* ⅓–⅔ in. broad, usually flaccid, finely acuminate; sheaths more or less hairy; ligule short, obtuse. *Spikes* 2–6 in., or more, nodding; rachis compressed, glabrous, edges ciliolate. *Spikelets* 8–18 by ⅔–1 in., green, glabrous sparsely hairy or scaberulous, nerves strong; gl. I and II strongly nerved; I subulate, ⅓ shorter than II or less; II oblong-lanceolate, acute acuminate or shortly awned; flg. gls. about ½ in. long, gradually narrowed into a slender erect awn, 7-nerved; awn ⅕–⅓ in. *Anthers* ⅓–½ as long as the palea.—The characters of the following varieties are far from constant.

Var. *longe-aristatum*, Hook. f.; flg. gl. ½ in., awns ½–¾ in.—N.W. Himalaya; Kumaon and Dalhousie, alt. 6–9000 ft.

Var. *khasianum*, Hook. f.; callus of fl. gl. villous awn up to 1¼ in.—Khasia Hills.

Var. *Wattii*, Hook. f.; stem stouter, lower spikelets pedicelled, pedicel of lowest half as long as the spikelet or less pubescent, awn about as long as the gl. B. Wattii, *Clarke in Journ. Linn. Soc.* xxv. (1887) 90, t. 40.—Naga Hills, alt. 5500–7500 ft., *Clarke.*

Var. *Pseudo-distachyon*, Hook. f.; stem short 10–18 in. strict, leaves very narrow erect, spikelets few closer together, awn = half the gl. or shorter.—Kashmir and Kumaon.

2. **B. pinnatum**, *Beauv. Agrost.* 101, t. 19, f. 3; rootstock creeping, leaves convolute, spike erect, flg. gls. mucronate. *Ledeb. Fl. Ross.* iv. 345; *Boiss. Fl. Orient.* v. 658; *Reichb. Ic. Fl. Germ.* t. 16, 17; *T. Nees Gen. Fl. Germ. Monocot.* i. t. 70. B. Barrelieri, *Roem. & Sch. Syst.* ii. 741. B. cœspitosum, *Roem. & Sch. l. c.* 737; *Reichb. l. c.* t. 17; *Host Gram. Austr.* i. t. 22. B. constrictum, *Presl Cyp. & Gram. Sic.* 40. B. corniculatum, *DC. Fl. Franc.* v. 608. B. rupestre, *Roem. & Sch. l. c.* 736; *Host l. c.* iv. t. 17, 18. Bromus gracilis, *Leys. Fl. Hal.* 26. B. pinnatus, *Linn. Sp. Pl.* 78; *Host Gram. Austr.* i. t. 22; *Engl. Bot.* t. 730. Festuca pinnata, *Moench. Meth.* 191; *Huds. Fl. Angl. Ed.* II. i. 48; *Knapp. Gram. Britt.* t. 75. Triticum bromoides, *Weber ex Wigg. Prim. Fl. Holsat.* ii. T. gracile, *DC. Fl. Fr.* iii. 84. T. macrourum, *Turc. in Bull. Soc. Nat. Mosc.* (1838) 105. T. phœnicioides, *DC. l. c.* vi. 284. T. pinnatum, *Moench Enum. Pl. Hass.* 53; *Kunth Enum. Pl.* i. 445, *Suppl.* 364, t. 35. Tragus pinnatus, *Panz. in Denkschr. Acad. Muench.* (1813) 256. Avena laeta, *Salisb. Prodr.* 22.

KASHMIR; alt. 6000 ft., *Clarke.*—DISTRIB. Eastwd. to Europe, N. Asia.

Glaucous. *Stem* 1–3 ft., very slender, naked above, smooth. *Leaves* rigid, almost glabrous, rarely flat; ligule ciliate. *Spike* 1–6 in.; rachis flattened, smooth.

Spikelets ¾–1½ in., erect, recurved from the rachis, glabrous or pubescent, green and purplish. *Glumes* coriaceous; I 5-nerved; II 7-nerved; flg. gls. oblong, mucronate, 5-nerved.

Tribe X. HORDEÆ. (See p. 8.)

125. **LOLIUM**, *Linn.*

Erect annual or perennial grasses. *Leaves* flat or convolute. *Spikelets* many-fld., solitary, sessile in the alternating distichous hollows of a terminal inarticulate spike, with the back of the lowest fl. gl. towards the rachis, rachilla jointed. *Glumes* many, I 0, except in the terminal spikelet; II erect, rigid, persistent, many-nerved, empty, margins not involute; flg. shorter than the empty, oblong, obtuse, acute or awned, dorsally rounded. 5- many-nerved; keels of palea ciliolate or serrulate. *Lodicules* 2, fleshy. *Stamens* 3. *Ovary* glabrous; styles terminal, feathery to the base, *Grain* glabrous, adherent to the palea.—Species few, of the temperate Old World.

The Italian Rye-grass. *L. multiflorum*, Lamk. (*italicum*, A. Br.) is a cultivated form of *L. perenne.*

1. **L. temulentum**, *Linn. Sp. Pl.* 83; annual, leaves flat, spikelets oblong-cuneate 3–8-fld., empty gl. linear many-nerved equalling or exceeding the rest of the spikelet, flg. gls. elliptic acute or awned. *Fl. Dan.* t. 160; *Host Gram. Austr.* t. 26; *Engl. Bot.* t. 1124; *Knapp Gram. Britt.* t. 101; *Reichb. Ic. Fl. Germ.* t. 5; *T. Nees Gen. Fl. Germ. Monocot.* i. t. 78; *Steud. Syn. Gram.* 340; *Kunth Enum. Pl.* i. 437; *Ledeb. Fl. Ross.* iv. 345; *Boiss. Fl. Orient.* v. 681; *Benth. Fl. Austral.* vii. 667; *Aitchis. Cat. Panjab. Pl.* 171; *Wall. Cat.* n. 3790; *Duthie Grass. N.W. Ind.* 44, *Fodd. Grass. N. Ind.* 68. L. annuum, *Lamk Fl. Fr.* iii. 620. L. arvense, *With. Arr. Brit. Pl. Ed.* III. ii. 168. Craepalia temulenta, *Schrank Baier Fl.* i. 382.

The UPPER GANGETIC PLAIN, the PANJAB, SIND, and WESTERN HIMALAYA, alt. 4–6000 ft.—DISTRIB. Europe, N. Asia (introd. elsewhere).

Stem 6–18 in., erect, usually stout. *Leaves* ⅛–⅓ in. broad, and sheaths smooth or scaberulous; ligule very short. *Spike* 6–10 in., strict, rachis stout. *Spikelets* very variable in size and shape, longer or shorter than the internodes; gl. I ⅓–⅔ in., rigid, erect; fl. gls. ⅛–⅙ in., awn ½ in. or shorter, or 0.

Var. *speciosum,* Griseb. in Ledeb. l. c.; spike very stout, gl. I large, flg. gls. short turgid obtuse. L. speciosum, *Stev. ex Bieb. Fl. Taur. Cauc.* i. 80. L. robustum, *Reichb. Ic. Fl. Germ.* xi. II. t. 4.—Western Himalaya (introd. ?).

2. **L. rigidum,** *Gaud., var.* Duthiei, *Hack. mss.*; annual, stem and spike very slender strict erect, leaves short narrow, spikelets narrowly oblong closely appressed to the rachis 3–6-fld., empty gl. rather shorter than the rest of the spikelet oblong-lanceolate subacute 5-ribbed, flg. gls. elliptic subacute 5-nerved scaberulous above the middle narrowed at the hyaline apex into a slender terminal awn or awn infra-apical.

KASHMIR; near Sirinagur, alt. 5–6000 ft., *Duthie* (no. 10,846).—DISTRIB. of *L. rigidum,* westward to the Caucasus and S. Europe.

I adopt Hackel's determination of this grass, which differs from *L. rigidum* proper in the narrower spikelets closely appressed to the rachis of the spike, and in the awned glumes, a character to which there is no approach in any of the numerous specimens of *L. rigidum* which I have examined. The awns are as long as the gls. or longer.

3. **L. perenne,** *Linn. Sp. Pl.* 83; perennial, leaves linear complicate in vernation, spikelets oblong 3–11-fld., empty gl. 3–5-ribbed, shorter than the rest of the spikelet, fl. gls. oblong-lanceolate obtuse or sub-acute 5-nerved awned or not. *Fl. Dan.* t. 747; *Host Gram. Austr.* i. t. 25; *Engl. Bot.* t. 315; *Knapp Gram. Britt.* t. 180; *Reichb. Ic. Fl. Germ.* t. 8; *T. Nees Gen. Fl. Germ. Monoc.* i. n. 78; *Kunth Enum. Pl.* i. 436, *Suppl.* 358, t. 33, f. 1; *Ledeb. Fl. Ross.* iv. 343; *Boiss. Fl. Orient.* v. 679; *Duthie Grass. N.W. Ind.* 44, *Fodd. Grass. N. Ind.* 68. L. vulgare, *Host l. c.* t. 25.

WESTERN TIBET, alt. 15,000 ft., *Stolizka* (*Duthie*); Sikkim Himalaya, alt. 7000 ft., *Clarke* (introduced).—DISTRIB. Europe, N. Asia.

Probably not indigenous in India, though likely to occur in temperate regions. Its perennial character and stoloniferous habit at once distinguish it.

126. LEPTURUS, *Br.*

Small slender grasses. *Leaves* flat or convolute. *Spikelets* 1–2-fld., sessile, solitary, ½ immersed in hollows of the rachis of a simple terminal articulate or not straight or incurved spike, with the back of the lowest fl. gl. opposite the rachis; rachilla jointed. *Glumes* 3 or 4, I minute or 0; II longer than the flg. gls., linear, rigid, acute, 5-nerved, erect or at length deflexed; III and IV much shorter than II, hyaline; palea 2-keeled. *Lodicules* 2, cuneate or lobed. *Stamens* 1–3. *Ovary* glabrous; styles short, distant. *Grain* narrow or oblong, glabrous, free.—Species 6, natives of the Old World.

1. **L. repens,** *Br. Prodr.* 207; perennial, creeping, spikes shortly peduncled fragile, gl. I 0, II acuminate or sub-aristate many-nerved much longer than the flg. gls. *Brongn. in Duperr. Voy. Bot.* 57, t. 16; *Kunth Enum. Pl.* i. 463, *Suppl.* 374; *Steud. Syn. Gram.* 357; *Trim. Cat. Ceyl. Pl.* 110; *Benth. Fl. Austral.* vii. 668. L. aciculatus, *Steud. l. c.*; *Miq. Fl. Ind. Bat.* iii. 403. Rottboellia repens, *Forst. Prodr.* 9. Monerma repens, *Beauv. Agrost.* 117. Lolium coelorachis, *Forst. in Herb. Paris, Steud. Nom. Ed.* II. ii. 64.

CEYLON; near Colombo, *Trimen*.—DISTRIB. Malay and Pacific Islds., Australia.

Stem elongate, woody branched and widely creeping below. *Leaves* 3–6 by ⅛–¼ in., spreading or erect, acuminate, glaucous; sheaths glabrous or mouth ciliate; ligule inconspicuous. *Spikes* 2–6 in., strict, erect; rachis glabrous. *Spikelets* 2-fld., rachilla elongate bearing an upper imperfect fl.; empty gls. 1 (or 2 in the uppermost spikelet) flat, rigid, ¼–½ in. long, closely appressed to the rachis; flg. gls. much shorter than the empty, elliptic, concave, 3-nerved; palea 2-keeled. *Lodicules* fleshy, obliquely truncate or 2-lobed, glabrous. *Grain* oblong.

2. **L. Roxburghianus,** *Steud. Syn. Gram.* 357; annual, erect, spikes long-peduncled very slender inarticulate, gl. I minute ovate, II linear-oblong acute rather shorter than the flg. gls. Rottboellia biflora, *Roxb. Fl. Ind.* i. 357 (*non Roth.*); *Kunth Enum. Pl.* i. 467. R.? Roxburghiana, *Schult. Mant.* ii. 430.

DECCAN PENINSULA, *Roxburgh*. EASTERN PANJAB, dry hills in Hissar, *Herb. Duthie*.

Whole plant 8 in. high, densely tufted. *Leaves* 3–4 in., filiform or setaceous, flexuous, flattened, margins ciliate with long strict hairs; sheath very short; ligule minute, 2-auricled. *Spikes* 2–3 in., as long as the filiform pedicels and hardly stouter, strict, erect. *Spikelets* $\frac{1}{10}$–$\frac{1}{8}$ in. 2-fld., both fl. bisexual (always?); gl. I sunk in the hollow of the rachis, obliquely ovate, 1-nerved, hyaline; II linear-oblong, acute, coriaceous, dorsally smooth, convex with a broad undefined midrib; III hyaline, distinctly 3-nerved, oblong, truncate, callus penicillate; palea hyaline, keels smooth; IV narrower than III; rachilla slender, penicillate. *Lodicules* minute. *Anthers* very short; filaments long. *Ovary* short; styles short, bases remote, divergent.—There is in Roxburgh's unedited Icones an excellent drawing of a small state of this plant, of which I have no specimen but Mr. Duthie's; it is no doubt overlooked from its small size and habit.

127. **OROPETIUM,** *Trin.*

A very small densely tufted erect annual. *Leaves* filiform. *Spikelets* very minute, 1-fld., half immersed in the alternating distichous cavities of the rachis of a simple slender curved inarticulate spike; rachilla bearded. *Glumes* I and II empty, persistent, I very minute, hyaline; II linear-lanceolate, rigid, recurved in fruit, tip obtuse or emarginate; III shorter, broader, hyaline, obtuse or truncate, 1-nerved; palea narrow, keels smooth. *Lodicules* 0? *Stamens* 3. *Styles* short. *Grain* oblong, terete, free.

Nardus stricta, Linn., is, according to Stewart, "Panjab Plants," p. 257, a native of the Trans-Indus district, and at a considerable elevation in the Jhelum basin. This is no doubt an error. Boissier gives as its Eastern limit, the Caucasus.

O. Thomaeum, *Trin. Fund. Agrost.* 98, t. 3; *Kunth Enum. Pl.* i. 464, *Suppl.* 375; *Miq. Fl. Ind. Bat.* iii. 403; *Thw. Enum. Pl. Zeyl.* 363; *Trim. Cat. Ceyl. Pl.* 110; *Wall. Cat.* n. 8869; *Wight Cat.* n. 1727; *Duthie Grass. N. W. Ind.* 45, *Fodd. Grass. N. Ind.* 69. Rottboellia Thomæa, *Koenig in Naturf.* xxiii. (1788) 210; *Willd. Sp. Pl.* i. 464; *Roxb. Pl. Corom.* ii. 17, t. 133, *Fl. Ind.* i. 357; *Dalz. & Gibs. Bomb. Fl.* 300. R. pilosa, *Willd. l. c.* 465. Nardus Thomæa, *Linn. f. Suppl.* 105; *Sm. in Trans. Linn. Soc.* i. 116.

PLAINS OF INDIA; from the Panjab to Bengal, Burma, and southward in the WESTERN PENINSULA. CEYLON, *Gardner*.

Whole plant 2–3 in. high, forming hard tufts, stems compressed. *Leaves* $\frac{1}{2}$–1 in., erect, margins ciliate with long strict hairs; sheath short, open; ligule lacerate, not auricled. *Spikes* 1–1$\frac{1}{2}$ in., about $\frac{1}{30}$ in. diam., solitary or fascicled on very short branches, curved; rachis undulating, green, tetragonous, with a broad central nerve on the flat faces. *Spikelets* $\frac{1}{20}$ in., closely appressed to the rachis in the hollow of which the minute gl. I is sunk; gl. II slightly convex with a broad thickened centre; III semicircular in profile, excessively membranous, keel most minutely scabrid.

128. **TRITICUM,** *Linn.*

Annual or biennial grasses. *Leaves* flat. *Spikelets* few-fld., tumid, sessile, distichously spicate, solitary, with their sides opposite cavities in the articulate or inarticulate rachis; upper fl. male or neuter. *Glumes* rigid, often unequal-sided, I and II empty, obtuse or shortly awned, few-nerved, persistent; flg. gls. oblong or ventricose, dorsally rounded or keeled above, awnless or 1–3-awned, 5–9-nerved, lateral nerves not conniving with the central; keels of palea ciliate. *Lodicules* entire, ciliate. *Stamens* 3. *Styles* very short. *Grain* grooved ventrally, often hairy, free or adherent to the palea.—Species about 10, Oriental and Eastern Asiatic.

Sect. I. TRITICUM, proper. *Glumes* keeled.

T. VULGARE, *Vill. Hist. Pl. Dauph.* ii. 153; *Host Gram. Austr.* iii. 18, t. 26; *Wall. Cat.* n. 2334; *Kunth Enum. Pl.* i. 438, *Suppl.* 360, t. 34; *T. Nees Gen. Fl. Germ. Monoc.* i. t. 79; *Aitchis. Cat. Panjab Pl.* 171. T. sativum, *DC. Fl. Fr.* iii. 625; *Lam. Encycl.* ii. 554; *Duthie Grass. N.W. Ind.* 45, *Fodd. Grass. N. Ind.* 68.

Cultivated in many parts of NORTHERN INDIA and the DECCAN PENINSULA, especially in the N.W., and up to 13,000 ft. in the HIMALAYA and TIBET.

It is beyond the scope of this work to detail the races of wheat cultivated in India, for which I must refer to Murray's article in Watts' "Dictionary of the Economic Products of India," and to Koernecke & Werner's "Handb. der Getreide Arten," ii. 209. All are believed to have been derived from *T. monococcum*, Linn., a native of the East from Greece to Mesopotamia. Hackel, the latest botanical writer on the wheats (in Engler & Prant. Planzenfam. ii. 80), regards all as referable to three species, *monococcum*, *sativum*, & *polonicum*, Linn. (the last is not cult. in India). According to Murray and others the following races are cultivated in India as elsewhere:—T. æstivum, *Linn. Sp. Pl.* 86; *Roxb. Fl. Ind.* i. 359; *Grah. Cat. Bomb. Pl.* 234; *Dalz. & Gibs. Bomb. Fl. Suppl.* 97. T. amyleum, *Ser. Mel. Bot.* i. 124. T. compactum, *Host Gram. Austr.* iv. 4, t. 7. T. compositum, *Linn. Sp. Pl. Ed.* II. 126. T. dicoccum, *Schrank. Fl. Baier*, i. 389. T. durum, *Desf. Fl. Atlant.* i. 114; *Stewart Panjab. Pl.* 262. T. hybernum, *Linn. Sp. Pl.* 80, *Roxb. l. c.* T. Spelta, *Linn. l. c.*; *Host l. c.* iii. 31, t. 30. T. Zea, *Host l. c.* t. 29. T. turgidum, *Linn. l.c.*; *Host. l. c.* t. 28.

Dalz. & Gibs. have also, as cultivated in the Concan, a *T. pilosum*, Dalz. & Gibs. Bomb. Fl. Suppl. 97, the "Buckshee wheat" with tomentose spikelets. I have seen no specimens of it.

Sect. II. ÆGILOPS. *Glumes* dorsally rounded, not keeled.

T. Ægilops, *Beauv. Agrost.* 180; annual, leaves linear flat, spike elongate cylindric fragile, spikelets oblong turgid 3–5-fld. half sunk in hollows of the rachis, gl. I and II similar oblong-quadrate many-nerved, fl. gls. rather longer awnless or in the upper spikelets with one strict erect awn. Ægilops squarrosa, *Linn. Sp. Pl.* 1051; *Tausch. in Flora*, xxxix. (1837) 108; *Kunth Enum. Pl.* i. 458, *Suppl.* 371; *Jaub. & Spach. Ill. Pl. Or.* iv. 12, t. 310; *Schreb. Gram.* ii. t. 27, f. 2; *Cav. Ic.* t. 90; *Ledeb. Fl. Ross.* iv. 326; *Boiss. Fl. Orient.* v. 676. Æ. cylindrica, *C. A. Mey. Verz. Pl. Cauc.* 26 (*non Linn*). Æ. Tauschii, *Coss. Notes Crit.* 69.

N.W. INDIA, *Falconer*; Wazuristan, alt. 4500 ft., *Stewart*.—DISTRIB. Westward to Spain and N. Africa.

Stem 6–18 in., erect or geniculately ascending, stiff, leafy. *Leaves* acuminate, smooth or slightly scabrid; sheaths smooth, upper subventricose; ligule very short. *Spike* $1\frac{1}{2}$–5 in., strict; rachis stout. *Spikelets* $\frac{1}{8}$–$\frac{1}{4}$ in., alternating in close succession; gl. I and II coriaceous, tip truncate often crenulate; flg. gls. hardly longer, truncate or retuse; awns $\frac{1}{2}$–$1\frac{1}{2}$ in.

DOUBTFUL SPECIES.

T. BENGHALENSE, *Host ex Steud. Nom. Ed.* II. ii. 715.

ÆGILOPS CILIARIS, *Koen. ex Roem. et Sch. Syst.* ii. 772 (genus *Manisuro proximus*) = Rottboellia ciliaris, *Willd. ex Steud. l. c.* 474 (*Ischæmi* sp., Trin.).

ÆG. CORDATA, *Linn.*, *Aitch. Cat. Panjab. Pl.* 560.

129. AGROPYRON, *J. Gærtn.*

Annual or perennial grasses. *Leaves* flat or convolute. *Spikelets* 3–many-fld., solitary, sessile, distichously arranged opposite to hollows in the rachis of a simple spike, with the sides of the glumes opposite the rachis;

rachilla usually jointed between the fl. gls. *Gl.* I and II empty, opposite, (not collateral) narrow, unequal, persistent; fl. gls. rigid, awned or not; nerves 5–7, converging above; keels of palea ciliate. *Lodicules* entire or ciliate. *Stamens* 3. *Ovary* hispid at the top, styles short, distant. *Grain* narrow, grooved in front, adherent to the palea or not.—Species about 20, in all temp. climates.

The following arrangement and nomenclature of the Indian plants of this most puzzling genus is tentative only, and I cannot render these more worthy of confidence without undertaking a critical study of the whole genus. The characters given under the species must not be regarded as absolute, though founded on careful study of very large series of specimens; for the more of these that are studied, especially if they come from different localities, the more do exceptional characters and connecting forms present themselves. It would hence appear that all the members of the section *Eu-agropyrum* (perennials with dorsally convex not keeled fl. gls. to which all the Himalayan forms belong) will resolve themselves into a very few widely distributed species. A further difficulty is the distinguishing *Agropyrum* from *Elymus*, and indeed *E. sibiricus* from *A. longe-aristatum*, in which two plants the empty glumes are not placed side by side as in *Elymus* proper; added to which the spikelets are often solitary in *E. sibiricus*, and I think sometimes aggregated in *A. longe-aristatum*, var. *Aitchisoni*. *A. caninum*, Roem. & Sch.; Duthie Grass. N.W. Ind. 44, has according to Duthie's mss. been found at Simla, alt. 6500 ft., by Gamble; and by himself in Gangotri, alt. 10–11,000 ft. I have seen no specimens.

* *Spikelets awned.*

1. **A. longe-aristatum,** *Boiss. Fl. Orient.* i. 660; stems leafy, leaves flat or convolute, spikelets loosely imbricate flattened laterally 6–12-fld., I and II long or short 3–5-nerved, flg. gls. spreading linear-lanceolate 3–5-nerved towards the tip narrowed into a long usually recurved awn 1–1½ in. long. Brachypodium longearistatum, *Boiss. Diagn. Ser.* I. vii. 127. *Griseb. in Goett. Nachr.* (1868) 73. Triticum longearistatum, *Jaub. & Sp. Ill. Pl. Orient.* ii. t. 199; *Steud. Syn. Gram.* 346. T. elymoides, *Hochst. ex A. Rich. Tent. Fl. Abyss.* ii. 440; *Steud. l. c.*

TEMPERATE HIMALAYA; from Kashmir to Kumaon, alt. 5500–13,000 ft. EASTERN and WESTERN TIBET, alt. 12–17,000 ft.—DISTRIB. Affghan, Persia, Abyssinia.

Stem 1–3 ft., stout or slender, erect or ascending from a tufted base. *Leaves* 6–10 by $\frac{1}{8}$–$\frac{1}{6}$ in., rarely convolute, and sheaths smooth; ligule very short. *Spikes* 3–5 in., erect or nodding, or horizontal from the decurved top of a very slender peduncle, rarely ovoid and very dense-fld.; rachis slender, smooth; margins of hollows scaberulous or ciliolate. *Spikelets* sessile, remote or approximate, sometimes crowded and secund, $\frac{1}{2}$–$\frac{3}{4}$ in. long without the awns, green or blue-purple. *Gl.* I and II most variable in length, $\frac{1}{4}$–$\frac{3}{4}$ the length of the lowest fl. gl., elliptic-ovate to narrowly setaceous, awned or not, tip sometimes notched on one side; flg. gls. narrowly lanceolate, smooth or scabrid, narrowed into a usually straight but sometimes recurved stout or slender scabrid awn, prominently 5-nerved above the middle rarely to the base, tip sometimes toothed unilaterally or on both sides of the awn; palea coriaceous, keels ciliolate with erect teeth above the middle. *Lodicules* hyaline, ciliate. *Anthers* short. *Grain* oblong, compressed.—Except by the long awns I am at a loss how to diagnose this variable grass, some states of which approach *Elymus sibiricus* so closely that I can hardly distinguish them. The following varieties are represented amongst Persian specimens. I do not find that they affect definite localities or elevations in the Himalaya.

1. Gl. I and II very short oblong-lanceolate acute or acuminate usually strongly 3-nerved, fl. gls. glabrous or nearly so except towards the tip.

2. Gl. I and II as in 1, fl. gl. scabrid more or less throughout.
3. Gl. I and II long setaceously lanceolate or lanceolate and long-awned, fl. gls. smooth or scabrid towards the tip.
4. Gl. I and II as in 3, fl. gls. scabrid more or less throughout.

2. **A. semicostatum,** *Nees ex Steud. Syn. Gram.* 346; tall, slender, leaves flat, spike elongate, spikelets distant 7–8-fld., gl. I and II linear-lanceolate acuminate smooth or scaberulous strongly 5–7-nerved, flg. rather longer erect lanceolate scaberulous above tip entire or 1–2-toothed and narrowed into a straight rarely recurved slender awn twice as long as itself or shorter. *Boiss. Fl. Orient.* v. 662; *Duthie Grass. N.W. Ind.* 45.

TEMPERATE HIMALAYA; from Kashmir to Sikkim, alt. 6–11,000 ft. (as low as 3000 ft. in the Sutlej valley), *Thomson, Royle, Jacquemont,* &c.—DISTRIB. Affghan. Turkestan.

Stems 2–3 ft., tufted, erect, or longer, and up to 8 ft., then weak and inclined. *Leaves* narrow, rarely ⅓ in. broad, acuminate, scaberulous or smooth; sheaths smooth; ligule very short. *Spikes* 3–8 in., rachis scabrid, slender or rather stout. *Spikelets* 1–2 in. including the awns, green; internodes of rachilla short; gls. scabrid as is the callus of the fl. gl.; empty gls. always large but very variable in size and nerves, ¼–⅔ in. long; flg. gls. erect and appressed, not at all spreading, tip toothed on one or both sides; awn rarely 1 in. long.—As suggested by Boissier this is very closely allied to *A. caninum.* In a specimen from Kashmir (*Duthie*, No. 12,651) named *semicostatum* by Hackel, the awns are upwards of an inch long and reflexed as in *longe-aristatum,* to which it may be referable.

Var. *Thomsoni*, Hook. f.; leaves hairy, sheaths villous with reversed hairs.—Kunawur, alt. 11–12,000 ft., *Thomson.*

3. **A. striatum,** *Nees ex Steud. Syn. Gram.* 346; tall, robust, leaves flat or involute, spikelets many large imbricating, gls. I and II linear-oblong or oblong-lanceolate as long as gl. III acute or obtuse very strongly 7– many-nerved, flg. gls. ovate-lanceolate 5-nerved puberulous or glabrous margins usually ciliate, tip notched or entire, awn straight longer or shorter than the gl. Triticum striatum, *Steud. l. c.*

KASHMIR, alt. 8–12,000 ft., *Royle, Jacquemont,* &c.

Stem 2–4 ft., as thick as a goose's or swan's quill, or more slender. *Leaves* ¼–⅔ in. broad, scaberulous above. *Spike* 3–8 in., rachis stout, glabrous with ciliolate margins of the hollows or puberulous. *Spikelets* ½–1 in. long, glumes not spreading; I and II subequal, very coriaceous, II ⅓–⅔ in. long, deeply channelled when dry; tip sometimes notched or obliquely truncate.—Probably a gigantic form of *A. semicostatum* or *caninum.*

4. **A. Jacquemontii,** *Hook. f.*; dwarf, leaves filiform flexuous, sheaths hyaline silvery, spikelets 2–5 cuneately obovate, glumes spreading, I and II small lanceolate acuminate, II 3-nerved awned, fl. gls. lanceolate smooth 5-nerved above the middle narrowed into a slender recurved awn many times longer than itself. Bromus tataricus, *Jacquem. mss.*

WESTERN TIBET; Bekar, *Jacquemont*; Nubra, alt. 17,000 ft., *Thomson*; plain N. of Kumaon, alt, 15,500 ft., *Strachey & Winterbottom*; Chimoreri, *Stoliczka.*

Stems 6–12 in., erect or ascending, densely tufted, thickened at the base and clothed with short shining sheaths. *Leaves* 1–3 in., convolute, glabrous, tip obtuse. *Spikelets* subterminal, close together, ½–¾ in. long without the awns, 4–6-fld.; rachilla smooth; gls. I and II ⅙–¼ in., margins hyaline, nerves very prominent; flg. with the outer pair of nerves marginal and produced to the base, the inner pair rarely reaching below the middle, tip sometimes 2-toothed; awn sometimes strongly recurved, rarely straight; palea obtuse, keels ciliolate. *Anthers* very small.—I should have taken Jacquemont's mss. specific name for this species, had it not been that it was taken up by Munro for another plant. (See *Elymus sibiricus.*)

5. **A. Thomsoni,** *Hook. f.*; lower sheaths villous, spikelets many ovoid erect, glumes erecto-patent, I and II ovate-oblong acute or acuminate 5–7-nerved margins hyaline, flg. gls. silkily villous ovate-lanceolate narrowed into an erect slender awn twice as long as the gl. or shorter.

WESTERN HIMALAYA, alt. 10–12,000 ft., from Kunawur and Piti, *Jacquemont, Thomson*, to Garwhal, *Strachey & Winterbottom, Duthie.*

Stem 2–3 ft., stout or slender, densely tufted. *Leaves* narrow, margins flat or involute, upper glabrous, lower more or less hairy. *Spikes* 3–6 in., rachis pubescent on the margins or all over. *Spikelets* $\frac{1}{2}$–$\frac{2}{3}$ in. without the awns, 5–7-fld.; internodes of rachilla short, scaberulous; gls. I and II with scaberulous nerves; II sometimes toothed at the tip and mucronate; flg. gls. faintly nerved; keels of palea ciliate.

** Spikelets awnless (or very shortly awned in Indian specimens).

6. **A. repens,** *Beauv. Agrost.* 102 (the Indian form); stem very slender, leaves narrow, spike slender, spikelets rather distant 5–6-fld. oblong quite glabrous, gls. I and II unequal linear or linear oblong obtuse acute or notched at the tip strongly 3–5-nerved margins scarious, II much shorter than III, flg. gls. linear obtuse or obliquely retuse or notched strongly 3–5-nerved in the upper half. *Reichb. Ic. Fl. Germ.* i. t. 20; *T. Nees Ic. Fl. Germ. Monocot.* i. n. 80; *Steud. Syn. Gram.* 343; *Ledeb. Fl. Ross.* iv. 341; ?*Boiss. Fl. Orient.* v. 663. A. acutum, *Roem. & Sch. Syst.* ii. 751; *Reichb. l. c.* t. 22. Triticum repens, *Linn. Sp. Pl.* 86; *Fl. Dan.* t. 748; *Host Gram. Austr.* ii. 27, t. 21; *Engl. Bot.* t. 909; *Knapp Gram. Britt.* t. 111; *Kunth Enum. Pl.* i. 440, *Suppl.* 361.

KASHMIR, alt. 9–12,000 ft., *Duthie.* WESTERN TIBET; Gilgit, alt. 8 00 ft., *Giles*; Ladak, Zanskar and Karakoram, alt. 8–14,000 ft., *Thomson*, &c.

Stems 1–2 ft., densely tufted at the base, erect or ascending. *Leaves* flat, or convolute when dry, $\frac{1}{12}$–$\frac{1}{8}$ in. broad, smooth, glabrous or puberulous above. *Spikes* 3–6 in., erect, rachis slender, margins of hollows quite glabrous. *Spikelets* $\frac{1}{2}$–$\frac{2}{3}$ in., very pale, internodes of rachilla short nearly glabrous; glumes rather spreading, calli quite glabrous; keels of palea smooth.—I follow Munro, Clarke and Hackel (in litt.) in referring this species to *A. repens*, though it differs much from Boissier's description of that species in the leaves not being scabrid, in the unequal glumes, of which I and II are much shorter than the flg. and in the latter not being lanceolate.

7. **A. dentatum,** *Hook. f.*; root creeping, leaves flat, spike slender, spikelets imbricating 3–5-fld. quite glabrous or sparsely pubescent, gls. I and II large subequal oblong obtuse obliquely truncate unidentate or mucronate rarely awned very strongly 7–9-nerved, fl. gls. linear-oblong obtuse acute or acuminate strongly 5-nerved above the middle.

KASHMIR, alt. 9–12,000 ft., *Jacquemont, Thomson*, &c. WESTERN TIBET, Karakoram, alt. 14,000 ft., *Clarke.*

Habit of *A. repens*, to which specimens have been referred by Munro and Clarke, but the spikelets (which are green or purplish) are closely imbricating, the margins of the hollows of the rachis scaberulous or ciliolate, the empty gl. much larger broader and as long as the flg. or nearly so and many-nerved.—Under No. 12,432 of Duthie's Kashmir collections I find along with typical *A. dentatum*, and apparently from the same plant, a specimen with scaberulous leaves and sheaths, ovate-lanceolate acuminate shortly awned 3–5-nerved empty gls. and fewer pubescent acuminate shortly awned flg. gls.

Var. ?*elatum*, Hook. f.; stem 3–4 ft. stout, leaves ½ in. broad, empty gl. ⅓–½ in. long ovate-lanceolate acuminate shortly awned entire or notched on one side 5–7-nerved, fl. gls. narrowed into a short awn.—Kashmir; Dras, alt. 12–13,000 ft., *Thomson.*—Perhaps this had better be referred to *semicostatum* or *striatum.* It was placed in *repens* by Munro.

130. **HORDEUM,** *Linn.*

Erect annual, rarely perennial grasses. *Leaves* flat. *Spikelets* 1-fld., 2–3-nate in the hollows or at the nodes of a simple cylindric spike, the lateral often imperfect; rachilla jointed at the base of the fl. gl. and produced above it with sometimes an imperfect gl. *Glumes* I and II empty, very narrow, rigid, persistent, the outer of each cluster of spikelets often together resembling an involucre; III dorsally rounded, 5-nerved above, narrowed into an erect or recurved awn; palea 2-keeled. *Lodicules* 2, ciliate. *Stamens* 3. *Styles* very short. *Grain* grooved in front, tip usually villous, adherent to the palea or free.—Species about 12, natives of temperate regions.

* *Annuals.*

H. VULGARE, *Linn. Sp. Pl.* 84; spikelets 2–6-ranked, fl. gl. long-awned. *Beauv. Agrost.* 114, t. 21, f. 1; *Host Gram. Austr.* iii. 23, t. 34; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 83; *Steud. Syn. Gram.* 357; *Duthie Grass. N.W. Ind.* 45, *Fodd. Grass. N. Ind.* 69, t. F. f. 32; *Nees Agrost. Bras.* 455; *Wall. Cat.* n. 3789; *Hack. in Engl. & Prantl Pflanzenfam.* ii. 80; *Koern. & Wern. Handb. der Getreideb.* ii. 600. H. sativum, *Pers. Syn.* i. 108. H. coeleste, *Viborg*; *Wight Cat.* n. 1772.

Cultivated, chiefly in N. INDIA and up to 13,000 ft. in the Himalaya.

Var. *hexastichon*, Aitchis. Cat. Panjab. Pl. 171; spikelets 6-ranked, H. hexastichon *Linn. Sp. Pl.* 85; *Beauv. l. c.* 114 (hexastachyon); *Kunth l. c.* 455, *Suppl.* 368; *Host l. c.* iii. 24, t. 35; *Gærtn. Carp.* ii. 10, t. 81, f. 3; *Roxb. Fl. Ind.* i. 358; *Grah. Cat. Bomb. Pl.* 234; *Dalz. & Gibs. Bomb. Fl. Suppl.* 96; *Nees Agrost. Bras.* 455; *Steud. l. c.*

Var. *distichon*; spikelets 2-ranked. H. distichon, *Linn. l. c.* 85; *Host l. c.* 35, t. 36; *Kunth l. c.* i. 455, *Suppl.* 369, t. 37; *Gærtn. Carp.* ii. 10, t. 81, f. 3; *Ledeb. Fl. Ross.* iv. 327; *Nees Agrost. Bras.* 454; *Steud. l. c.* 351. Zeocriton disticum, *Beauv. Agrost.* 115.—Quetta, *Stocks* (cult.).

Var. *Ægiceras*, Aitchis. Cat. Panjab Pl. 171; spikelets 2-ranked, gl. III produced into a dilated 3-fid appendage with the lateral lobes deflexed. H. Aegiceras, *Royle Ill. Bot. Himal.* 418, t. 97; *Henslow in Hook. Kew Journ.* i. (1849) t. 2, 3; *Schlecht. in Bot. Zeit.* (1847) 768; *Lindl. Nat. Syst. Bot. Ed.* II. 372. H. coeleste *var.* trifurcatum, *Hort. Monsp.*; *Schlecht. in Linnæa*, xi. (1837) 543; *Ser. in Ann. Sc. Phys. & Nat. Soc. Agric. Lyon.* iv. *ex Bot. Zeit.* (1847) 768. H. heterostachyum, *Beauv. Agrost.* 114. H. himalayense, *var.* trifurcatum, *Hort. Monsp.*; *ex Irmisch in Linnæa*, xiii. (1839) 124, t. 4; *Steud. l. c.* 252. H. nepalense, *Sweet Hort. Brit. Ed.* I. 444. H. trifurcatum, *Fisch. & Mey. Ind. Sem. Hort. Petrop. fasc.* 3 (1837) 131; *Wender. in Flora* (1843) 233. H. vulgare, *var.* cornutum, *Schrad. in Linnæa*, xii. (1838) 471. H. vulgare, *var.* trifurcatum, *Koern. & Wern. l. c.* i. 170, t. 3, f. 26. Critho Aegiceras, *E. Mey. Ind. Sem. Hort. Regiom.* 1848, 5; *in Ann. Sc. Nat. Ser.* III. xi (1849) 253; *Linnæa*, xxiv. (1851) 195. Triticum hordeiforme, *Wall. ex Steud. Nomencl. Ed.* II. ii. 716.—Thibet Barley, *Hook. Lond. Journ.*

Bot. vii. (1843) 215.—Temp. and Alp. Himalaya, from Kashmir to Sikkim, Tibet and China.

Var. *nudum*; spikelets 2-ranked, grain free within the palea. H. nudum, *Arduini in Schult. Mant.* ii. 437. H. gymnodistichum, *Watt Dict. Econ. Prod. Ind.* iv. 274. H. distichum, *β. Kunth l. c.* i. 455; *Kew Bullet.* (1888) 271. H. coeleste, *Koern. et Wern. l. c.* i. 166, ii. 629. ?H. himalayense, *Rittig Beschr. Himal. Gerste* (1822), *ex Schult. Mant.* ii. 481.—Cult. up to 14,000 ft. with brown or often purplish spikes.

1. **H. spontaneum,** *C. Koch in Linnæa,* xxi. (1848) 430; tall, densely tufted, leaves flat finely acuminate, spike narrow rachis fragile, spikelets 2-ranked lateral stipitate male awnless, flg. gl. lanceolate plumosely ciliate, awn very long flattened. *Steud. Syn. Gram.* 351. H. ithaburense, *Boiss. Diagn. Ser.* I. xiii. 20; *Fl. Orient.* v. 687; *Aitchis. in Trans. Linn. Soc. Ser.* II. iii. 127. H. Decaisneanum, *Hort.*

BRITISH BELUCHISTAN; Quetta, *Stocks.*—DISTRIB. Westwd. to Palestine.

Stems forming great clumps 3 ft. high, resembling cultivated barley, *Aitchis. l. c.* *Leaves* flaccid, narrowed into very long points; ligule short. *Spikes* 1½–3 in. *Spikelets* ½ in., pedicel flat with villous margins; gls. linear-oblong. *Awn* 4–8 in. —The only truly wild Barley of the cultivated type, most nearly allied to *vulgare* var. *distichon,* but differing in the villous spikelets and jointed fragile spike. Grisebach, however (*in Ledeb. Fl. Ross.* iv. 317) says under the cultivated *H. distichum,* that he has found the spike to be fragile in some of its forms.

2. **H. murinum,** *Linn. Sp. Pl.* 85; stems ascending leafy, spike stout subcylindric fragile dense-fld., spikelets 3-nate lateral male or neuter, fl. gl. lanceolate awned ciliate below or glabrous. *Fl. Dan.* t. 629; *Host Gram. Austr.* i. 25, t. 32; *Engl. Bot.* t. 1971; *Knapp Gram. Britt.* 104; *Reichb. Ic. Fl. Germ.* t. xi.; *T. Nees Gen. Fl. Germ. Monocot.* i. n. 83; *Kunth Enum. Pl.* i. 456, *Suppl.* 370; *Ledeb. Fl. Ross.* iv. 328; *Boiss. Fl. Orient.* v. 686; *Benth. Fl. Austral.* vii. 669; *Nees Agrost. Bras.* 453, *Fl. Afr. Austral.* 363; *Steud. Syn. Gram.* 352; *Duthie Grass. N.W. Ind.* 45. H. leporinum; *Link in Linnæa,* iv. (1835) 133. H. vaginatum, *C. Koch in Linnæa* xxi. (1848) 433; *Steud. l. c.* Triticum murale, *Salisb. Prodr.* 27. Zeocriton murinum, *Beauv. Agrost.* 125.

KASHMIR; alt. 5–6000 ft., *Jacquemont, &c.* PESHAWUR, *Stewart.*—DISTRIB. Westwd. to the Atlantic.

Stem 6-18 in., ascending from an often decumbent base. *Leaves* flat, glabrous or sparsely puberulous and scaberulous; sheaths inflated; ligule small, scarious. *Spikes* 1–2½ by ½–⅝ in., inclined, green. *Spikelets* with the awns 1 in.; empty gl. filiform; flg. gl. flattened, much shorter than the straight awn; keels of palea ciliate.

** *Perennials.*

3. **H. secalinum,** *Schreb. Spicil. Fl. Lips.* 148; stem erect leafy, spike narrow subcylindric dense-fld., spikelets 3-nate lateral male or neuter. *Host Gram. Austr.* i. 26, t. 33; *Trin. Sp. Gram. Ic.* t. 3 & 4; *Benth. Fl. Austral.* vii. 669; *Boiss. Fl. Orient.* v. 687. H. pratense, *Huds. Fl. Angl. Ed.* II. 56; *Engl. Bot.* t. 409; *Trin. l. c.* t. 4; *Knapp Gram. Britt.* t. 105; *Reichb. Ic. Fl. Germ.* i. t. xi.; *Ledeb. Fl. Ross.* iv. 328; *Steud. Syn. Gram.* 352; *Duthie Grass. N.W. Ind.* 45. H. nodosum, *Linn. Sp. Pl. Ed.* II. 126 (*excl. Syn. Ray.*). H. brevisubulatum, *Link in Linnæa,* xvii. (1843) 391. H. maritimum, *Roth Tent. Fl. Germ.* II. i. 150; *Fl. Dan.* t. 630. Zeocriton secalinum, *Beauv. Agrost.* 115.

KASHMIR & ISKARDO, alt. 7700 ft., *Clarke, Duthie.* WESTERN TIBET, alt. 10–15,000 ft., *Thomson.* Shibchilam (N. of Kumaon) alt. 15,000 ft., *Strachey & Winterbottom.*—DISTRIB. Europe, N. Asia, temp. N. & S. America.

Stems densely tufted, 3–6 in., stout or slender, often geniculate at the base. *Leaves* short, linear, flat, glabrous or hairy beneath; ligule small. *Spikes* 2–3½ by ⅙–⅓ in., erect or inclined; rachis subfragile, green or purplish. *Spikelets* densely crowded, sub hexastichous, ⅛–¼ in. long, awns longer or shorter than the gl.—Some of Dr. Thomson's Tibetan specimens are upwards of 3 ft. high with the stem nearly as thick as a goose-quill.

131. ELYMUS, *Linn.*

Characters of *Agropyrum*, but spikelets for the most part in pairs, threes, or fascicled in the nodes of the rachis, and empty gls. usually more or less collateral —Species about 20 enumerated, of N. and S. temperate regions.

Boissier (*Fl. Or.* v. 690) considers *Elymus* as too closely allied to *Hordeum.* To me it appears to be connected with *Agropyrum* through *E. sibiricus,* and *A. longe-aristatum,* in both which the empty glumes are opposite one another, not as in the other Indian *Elymi* placed more or less collaterally. It is as difficult to limit the species in one genus as in the other, and the more specimens one has of any species, the more difficult it is to limit it.

* *Awn of fl. gl. much longer than the gl.*

1. **E. sibiricus,** *Linn. Sp. Pl.* 3; spike short or elongate and flexuous, spikelets geminate and fascicled, empty gls. subopposite much shorter than the 5–7-fld. spikelet, fl. gls. lanceolate 5-nerved narrowed into a slender erect or recurved awn much longer than the gl. *Schreb. Gram.* i. t. 21, f. 1; *Kunth Enum. Pl.* i. 451, *Suppl.* 367; *Ledeb. Fl. Ross.* iv. 330; *Steud. Syn. Gram.* 348; *Duthie Grass. N.W. Ind.* 46. E. glaucus, *Buckl. in Proc. Acad. Sc. Philad.* 1862, 99. E. nutans, *Griseb. in Goett. Nachr.* (1868) 72. E. tener, *Linn. f. Suppl.* 114.

TEMPERATE & ALPINE HIMALAYA; from Kashmir to Sikkim, alt. 10–14,000 ft. EASTERN & WESTERN TIBET, alt. 10–15,000 ft. (15-18,000 ft., *Stoliczka*).—DISTRIB. Affghan., Abyssinia, N. Asia & America.

Stem 1–2 ft., densely tufted, ascending, smooth, erect inclined or decurved below the spike. *Leaves* ⅙–⅓ in. broad, nearly smooth; ligule very short. *Spike* very variable, 4–10 in. long, green or brownish, straight curved or flexuous; rachis smooth, or faintly scabrid, as are the margins of its hollows. *Spikelets* ½–1 in. long excluding the awns, sessile and pedicelled; rachilla slender, minutely scaberulous, its internodes long or short; gl. I and II most variable, II ¼–⅔ the length of the lowest fl. gl., from narrowly oblong to ovate-oblong lanceolate or almost setaceous, acute acuminate or both or II only awned, quite entire (never notched), usually strongly 3-nerved; fl. gls. narrowly lanceolate, narrowed into the awn, quite entire or tip toothed on one or both sides at the base of the awn, glabrous smooth or faintly scaberulous, 5-nerved usually to the base; awn ⅔–1 in.; palea linear, keels ciliate-toothed above the middle. *Lodicules* lacerate. *Anthers* short. *Ovary* pyriform, top hirsute; stigmas short.—A very abundant grass in Tibet and the higher Himalaya, states of which are with difficulty distinguished from *Agropyrum longe-aristatum* (which see), and just as variable, in the empty glumes especially, but the awns are usually shorter. A small very slender form with an inclined horizontal and upcurved spike of secund purplish spikelets is var. *minor* of Hackel (Duthie n. 13,745) and *Agropyrum longe-aristatum* var. *Aitchisoni* of Boiss. (Fl. Or. v. 660) and *Brachypodium tataricum,* Munro in Journ. Linn. Soc. xviii. (1881) 109.—Another variety (*Bromus dubius,* Jacquem. mss.) has oblong very dense short subcylindric spikes. It is a very alpine form, found at 15–18,000 ft. elevation in Eastern and Western Tibet.

2. **E. dahuricus**, *Turc. in Bull. Soc. Nat. Mosc.* (1838) 105, et xxix. I. (1867) 62; spike narrow strict or subflexuous, spikelets geminate 2–3-fld., empty gls. collateral linear-lanceolate acuminate or subaristate 5–7-nerved nearly as long as the spikelet, fl. gls. lanceolate scaberulous 5-nerved narrowed into a slender erect awn as long or twice as long as the gl. ?Hordeum sylvaticum, *Duthie Grass. N.W. Ind.* 45.

KASHMIR, *Falconer*, &c.; Iskardo, *Clarke*, alt. 7500 ft.; Sind Valley, 6000 ft., *Gammie.* WESTERN TIBET, alt. 11–14,000 ft., *Thomson*—DISTRIB. N. Asia.

Stem 2–3 ft., rather stout and leafy, or shorter more slender and leafy at the base chiefly. *Leaves* 3–8 by $\frac{1}{8}$–$\frac{1}{3}$ in., flat, finely acuminate, nearly smooth or scaberulous above; sheaths smooth; ligule very short. *Spike* 3–8 in.; rachis glabrous or nodes pubescent. *Spikelets* $\frac{1}{3}$–$\frac{1}{2}$ in. exclusive of the awns, green, imbricating; gl. I and II subequal, strongly 3–5-nerved, smooth or scaberulous, rarely toothed on one side towards the tip; fl. gls. lanceolate, more or less distinctly notched at the tip, 5-nerved, from nearly glabrous to scaberulous, and with minutely ciliolate nerves; awn $\frac{1}{3}$–$\frac{1}{2}$ in.; keels of obtuse palea strongly shortly ciliate. *Grain* oblong, dorsally compressed, concavo-convex, tip villous.

Var. ? more robust, spike stouter, spikelets large, $\frac{1}{2}$–$\frac{2}{3}$ in., more crowded, 3–5-fld., awns of fl. gl. $\frac{1}{2}$–$\frac{2}{3}$ in.—Karakoram, alt. 12,000 ft., *Clarke.*

** *Awn of fl. gl. much shorter than the gl.* I.

3. **E. dasystachys**, *Trin. in Ledeb. Fl. Alt.* i. 120, *Fl. Ross.* iv. 333, *Ic.* t. 249; spike stout strict, spikelets geminate 2–5-fld., empty gls. collateral unequal subulate-lanceolate 1–3-nerved aristately acuminate, II nearly as long as the lowest fl. gl., fl. gls. lanceolate more or less silky 5-nerved tip notched towards the subulate or shortly awned tip. *Steud. Syn. Gram.* 350; *Duthie Grass. N.W. Ind.* 46. E. jenisseensis, *Turc. in Bull. Soc. Nat. Mosc.* xxix. (1856) i. 64.

KASHMIR & KUNAWUR, alt. 8–12,000 ft., *Jacquemont, Clarke*, &c. WESTERN TIBET, alt. 10–14,000 ft., *Thomson*, &c. Laptal (N. of Kumaon) alt. 14,500 ft., *Strachey & Winterbottom.*—DISTRIB. Turkestan, Siberia.

Stem 2–5 ft., stout or slender. *Leaves* 6–12 in., flat and $\frac{1}{6}$–$\frac{1}{3}$ in. broad, or narrow with margins involute, smooth or scaberulous. *Spike* 6–8 in., variable in breadth; rachis stout, pubescent sparsely villous or nearly glabrous. *Spikelets* $\frac{1}{2}$ in. long; gl. I and II very narrow, 1- rarely 3-nerved; fl. gls. notched at the base of the awn on both sides, 5-nerved, rarely almost glabrous; keels of obtuse palea stoutly ciliate.

4. **E.? Thomsoni**, *Hook. f.*; spike stout strict, spikelets 2–3-nate densely crowded sessile and pedicelled, glumes all scarious (in frt.) broadly oblong or ovate-oblong with hyaline margins or very stout midrib and 7–9 fainter lateral nerves suddenly ending in a short stout awn.

WESTERN TIBET; Danskar, in Piti, alt. 13,000 ft., *Thomson.*

Stem 12–14 in., very stout, erect. *Leaves* 3–6 in., narrow, convolute, coriaceous, smooth, finely acuminate, subpungent; sheaths broad, striate; ligule very short. *Spike* 3–4 in., rachis very stout, smooth or subsilky on the angles. *Spikelets* $\frac{1}{3}$–$\frac{1}{2}$ in., glabrous or faintly pubescent; rachilla very short and stout; glumes subpubescent, usually broadly notched below the awn often unequally, margins ciliolate, 7–9-nerved; palea very broad, pubescent, ciliate, 2-lobed, keels unequal more or less ciliate. *Grain* free, concavo-convex, top glabrous.—I have seen only two specimens of this plant, which resembles a wheat more than an *Elymus*, from which latter genus it differs in the free grain with a glabrous tip; both specimens are far advanced, and I doubt the grain being in a normal condition.

131.[1] **ASPERELLA,** *Humb.*

(Not in Clavis, p. 9.)

Tall perennial grasses. *Leaves* narrow, flat. *Spikelets* 1- or more-fld., 2–3-nate opposite hollows in the rachis of a terminal elongate simple slender spike, with the sides of the glumes opposite the rachis; rachilla jointed under the flg. gls. *Glumes* I and II 0, or in the lowest spikelets minute, subulate; flg. gls. rigid, lanceolate, convolute, narrowed into an awn, dorsally rounded, 5-nerved above the middle; palea 2-keeled. *Lodicules* 2, obovate or dimidiate-obovate, hairy. *Styles* very short, free, stigmas plumose. *Grain* narrowly oblong, ventrally grooved, adherent to the palea, tip villous.—Species 5, 1 Siberian, 2 American, 1 N. Zealand, and the following.

A. Duthiei, *Stapf in Hook. Ic. Pl. ined. f.*; spikelets 1-fld., rachilla produced.

WESTERN HIMALAYA; Tihri-Garwhal; alt. 7–8000 ft., *Duthie.*—DISTRIB. China.

Stem 3 ft., glabrous. *Leaves* 10 by $\frac{3}{4}$ in. lanceolate, setaceously acuminate, thinly membranous, scabrid on both surfaces; sheaths elongate, nodes thinly villous; ligule truncate, minutely ciliolate. *Spike* 6 in., very slender, rachis pubescent. *Spikelets* $\frac{1}{3}$–$\frac{5}{12}$ in. long, nearly all 2-nate, pale; rachilla glabrous terminated by an awn; flg. gl. lanceolate, 7-nerved, narrowed into an awn almost twice as long as itself, nerves rough; palea about as long as the gl. *Lodicules* obovate, hairy.—Allied to *A. Hystrix*, Willd., and to *A. sibirica*, Trautv. differing from both in the 1-fld. spikelets. Foliage as in *A. Hystrix*, but spike not at all stiff. *A. sibirica* has narrower firmer leaves, more markedly nerved gls., and much shorter awns.—*Stapf.*

Tribe XI. BAMBUSEÆ. (See p. 91.)

By J. S. GAMBLE, M.A., F.L.S., Conservator of Forests, N.-W. Provs.

The following account of the Indian *Bambuseæ* is drawn up, almost verbatim, from Mr. Gamble's "Bamboos of British India," which forms part of vol. vii. of Dr. King's "Annals of the Royal Botanic Gardens of Calcutta," and of which Dr. King favoured me with a copy in advance, together with his and Mr. Gamble's permission to reproduce its contents in a form suited to the "Flora of British India." In doing this I have been obliged to curtail the descriptions. And in order to preserve the arrangement of matter adopted in this work, I have had to substitute for the Keys to the species employed by Mr. Gamble, specific characters selected according to my judgment from his detailed descriptions; and in a few cases to substitute synonymous technical terms for those he has used. I have added nothing; for it is obvious that a botanist of Mr. Gamble's ability and wide experience of so many of the Indian Bamboos in their native forests, having access also to the unrivalled collections in the Herbarium of the Calcutta Gardens, should have exhausted the subject in so far as materials were available. It must not be supposed that this work supersedes his "Bamboos of British India," which is indispensable to the student of the tribe, by reason of its fuller descriptions, and admirable plates and analyses. My cordial thanks are directly due to Dr. King and Mr. Gamble for this generous contribution to the "Flora of British India," and indirectly for the authentically named collection of specimens corresponding to Mr. Gamble's descriptions, which has been presented by the Government of India to the Herbarium of the Royal Gardens, Kew.

Since the above was written, Mr. Freeman Mitford's "The Bamboo Garden" has appeared, a work replete with valuable observations upon the habit, mode of growth, and other characters of the hardy species of Bamboo (including 5 Indian) cultivated by him. In it is pointed out (see *Arundinaria Simoni*, p. 60) for the first time the true characters of the two types of sheath and blade that occur in *Bambuseæ*, and which do not obtain, so far as I know, in any other tribe of grasses. In a communication which Mr. Mitford has been good enough to make to me on this subject, he has formulated his views as follows, and has kindly allowed me to introduce them here.

"The sheath is an organ playing so important a part in the life of the Bamboo that it deserves something more than a cursory notice. In the grasses generally the sheath is regarded by botanists as taking the place of the petiole of the leaf. It happens, however, that the leaves of most Bamboos—indeed of all the hardy Bamboos—have a distinct continuation of the midrib of the leaf attaching it to the sheath and articulated, which continuation might perhaps be correctly termed a petiolule. The Bamboos, as it appears, bear sheaths of two types. There is first of all the series of sheaths which, borne one on each node and wrapped tightly round the culm or branch, as the case may be, protect it during growth. This form of sheath is divided or split transversely into two members, the ligule and the limbus or blade, the latter being what I would term a pseudophyll, or false leaf, sessile, lacking both midrib and petiole, varying in size in the different species, but always the first part to wither and disappear. In some Bamboos—those of the *Phyllostachys* group—this sheath falls away as soon as branching takes place; in others, of the *Arundinaria* group, it remains, and having guarded the tender growth of the parent culm or branch it springs aside with the young branches or branchlets, devoting the remainder of its life to their protection until they can stand alone.

"Then there is the second form of sheath bearing a true leaf with petiole and midrib. This is the form assumed by the two, three, or four sheaths at the top of each culm branch and branchlet above the topmost node where branching ends. This true leaf is persistent upon the sheath. The ligule is present, as in the first type, but the deciduous pseudophyll is replaced by an evergreen leaf.

"An interesting question arises as to whether there is any transition stage between the two types of blade, or whether the change is always sudden. I think that in many Bamboos I can trace such a transition stage; that is to say, that each successive pseudophyll on the stem becomes more and more like a true leaf, something of the nature of an arrested midrib being perceptible in the pseudophylls which are found near the top of the culm, though it is not until the last branching node has been passed that the true leaf-bearing sheaths occur. The principle remains inviolate (throughout the hardy species at any rate), and the distinction between the two classes of sheaths is absolutely maintained."—A. B. F. M.

I would remark in conclusion that Mr. Mitford's observations, extending to the nervation of the leaves of Bamboos, lead him to the conclusion that of those cultivated by him in the open air in the middle of England, the truly hardy only have tessellated leaves; the tender, such as *Arundinaria Falconeri* and *falcata*, having very inconspicuous transverse nervules, or none.—J. D. H.

Subtribe I. ARUNDINARIEÆ. (See p. 91.)

132. **ARUNDINARIA,** *Michx.*

Erect or climbing shrubs. *Stems* slender, nodes usually prominent, internodes rather short, branches short fascicled. *Stem-sheaths* papery, straw-colrd., blade subulate. *Leaves* usually small, jointed on the sheath. *Infl.* on separate stems, or terminal, or on leafing branches. *Spikelets* 1– many-fld., compressed, usually all bisexual, except sometimes the terminal, often sheathed; empty gls. 2, unequal, membranous; flg. gls. longer, obtuse acute or mucronate, many-nerved; palea 2-keeled. *Lodicules* 3, ciliate. *Stamens* 3, rarely up to 6. *Ovary* globose above; style short, stigmas 2–3 plumose. *Grain* ovoid or narrowly oblong, dorsally furrowed, included in the gl. and palea.—Species about 50, 14 American, 1 African, the rest Asiatic.

A. Species of which the flowers are known.

Sect. 1. Erect shrubs; infl. on leafy branches; bracts of infl. small. *Stamens* 3.

* Nodes of stem not spinous. See also *A. Pantlingi.*

† *Spikelets many, in large terminal panicles.*

1. **A. Walkeriana,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 21; leaves shortly stoutly petioled thick elliptic to oblong-lanceolate pungent acuminate tessellate base rounded margins cartilaginous recurved spinulose-serrate. *Bedd. Fl. Sylv., Forest. Man. p.* ccxxx.; *Gamble Bamb. Brit. Ind.* 3, t. 1; *Trim. Cat. Ceyl. Pl.* 110.

TRAVANCORE; Pulney Hills, *Beddome.* CEYLON; *Walker, Thwaites.*

Stems 1 in. diam., thickly clothed above with sheaths of fallen leaves, internodes about 15 in. *Leaves* 5–11 by 1–$1\frac{1}{2}$ in., base cucullate, midrib narrow, nerves 6–10 pairs; sheath glabrous, mouth truncate ciliate, margin with curved bristles; ligule short. *Panicle* 6–12 in., red-purple, branchlets filiform, lower axils glandular and upper sparsely hairy. *Spikelets* up to 1 in. when mature, narrow, glabrous, 3–4-fld.; rachilla flattened, ciliate; gl. I and II subequal $\frac{1}{10}$–$\frac{1}{5}$ in., I usually 3-nerved; II, 5-or more-nerved, apiculate, ciliate; flg. gls. larger, with 2 prominent nerves and intermediate finer ones; keels of palea ciliate.—Probably flowers frequently.

2. **A. Wightiana,** *Nees in Linnæa,* ix. (1834) 482; shrubby, slender, leaves thin shortly petioled long-acuminate tessellate base rounded or narrowed margins incurved scabrid, spikelets 3–5-fld. in dense leafy spreading panicles long-pedicelled, fl. gls. obtuse. *Rupr. Bamb.* 26, t. 3, f. 10; *Munro in Trans. Linn. Soc.* xxvi. (1868) 19; *Bedd. Fl. Sylv., Forest. Man. p.* ccxxx., *Anal. Gen.* t. 28; *Brandis For. Fl.* 563; *Steud. Syn. Gram.* 335; *Thw. Enum. Pl. Zeyl.* 444; *Gamble Bamb. Brit. Ind.* 4, t. 2.

MALABAR & TRAVANCOR, alt. 6–8600 ft., *Wight,* &c. CEYLON; Pedrotallagalla, alt. 8000 ft., *Thwaites* (CP. 3860).

Gregarious, rhizomes branching. *Stems* 6–10 ft., or higher; nodes swollen, girt with a hairy ring; internodes 10–14 in., usually flattened on one side and rough, young strongly striate; branchlets whorled. *Stem-sheaths* 4–8 by 1–3 in., narrowed slightly upwards, base hispid with golden tubercle-based hairs, limb 1–$1\frac{1}{2}$ in., subulate, scabrid. *Leaves* 5–7 by $\frac{3}{4}$–1 in., glabrous above, glaucescent beneath, midrib usually glandular-pubescent, nerves 5–7 pairs; sheaths striate, keeled, often purple, sometimes hispid with tubercle-based hairs, mouth 5–8-setose, margins ciliate; ligule short, obtuse. *Spikelets* 3–5-fld., purple, glabrous or scabridly hirsute; gls. I and II ovate, acute; I 5– II 7-nerved; fl. gls. ovate, 9–11-nerved, mucronate, scabrously hispid; palea 2-cuspidate, 3-nerved and transversely nervuled, keels ciliate.—Flowers annually.

Var. *β. hispida,* Gamble l. c.; leaf-sheaths and stems thickly clothed with tubercle-based golden hairs, internodes more flattened on one side. A. hispida, *Steud. l. c.* A. moliniformis, *Hochst. in Herb. Hohenack.* n. 1282.

3. **A. floribunda,** *Thw. Enum. Pl. Zeyl.* 375; internodes retrorsely hirsute, leaves thin lanceolate acuminate spinulose-serrate tessellate narrowed into a very short 2-glandular petiole, spikelets 5–8-fld. minutely silkily pubescent, fl. gls. acuminate. *Munro in Trans. Linn. Soc.* xxvi. (1868) 20; *Beddome Fl. Sylv., Forest. Man. p.* ccxxx.; *Trim. Cat. Ceyl. Pl.* 110; *Gamble Bamb. Brit. Ind.* 6, t. 3.

CEYLON; Maturatte district, alt. 5000 ft., *Thwaites* (CP. n. 2624).

Stems 2–5 ft., erect; internodes 2–4 in. *Leaves* glabrous, primary nerves 3–4 pairs; sheath sometimes hispid with tubercle-based hairs, ending in a ciliate membrane below the petiole and short auricles with 5–8 twisted bristles; ligule short. *Panicle* large, with slender filiform branches appressed at first, axils glandular. *Spikelets* about 1 in., gl. I $\frac{1}{10}$–$\frac{1}{5}$ in., acute, 3-nerved, tip ciliate; II longer, more nerved; fl. gls. 3 in., acuminate, 7–9-nerved, tip ciliate; keels of palea ciliate; grain $\frac{1}{5}$ in., red.

†† *Spikelets few, in short panicles.*

4. **A. elegans,** *Kurz in Journ. As. Soc. Beng.* xlii. (1873) 248; *For. Fl. Burma,* ii. 549; stems slender, internodes smooth, leaves linear-lanceolate long acuminate tessellately nerved, margins cartilaginous scabrid, spikelets long 7–8-fld. in a terminal interrupted panicle or raceme pedicelled flattened, fl. gls. distant acuminate. *Gamble Bamb. Brit. Ind.* 6, t. 4.

UPPER ASSAM; Naga Hills, alt. 5500 ft., *Rollo.* BURMA, Poneshee, *J. Anderson*; Tenasserim and Martaban, alt. 5–7500 ft., *Kurz*, &c.

Stems 12–20 ft. high by $\frac{3}{10}$–$\frac{8}{10}$ in. diam.; internodes 7–9 in., flattened on one side, smooth; sheaths $\frac{1}{3}$ the length of the internodes, papery, hispidulous, upper $\frac{1}{3}$ narrowed to a truncate minutely auricled mouth; blade subulate, recurved. *Leaves* 4–5 by $\frac{3}{10}$–$\frac{1}{2}$ in., base narrowed into a very short petiole, midrib yellow, primary nerves 4–6 pairs; sheath smooth, striate, tipped with a ciliate callus, auricles bristly; ligule very short. *Spikelets* 1 in. or more; gl. I and II $\frac{1}{5}$ in., ovate, acuminate, 3–5-nerved, keel ciliate; fl. gls. similar, 7-nerved and transversely nervuled; palea obovate, 2-fid, 2-nerved between the white-ciliate keels and 1-nerved on each side of them.

5. **A. polystachya,** *Kurz ex Gamble Bamb. Brit. Ind.* 7, t. 5; stems soft, leaves thin soft lanceolate acuminate with a twisted tip, rough above white hairy or smooth beneath not or rarely tessellately nerved margins scabrous ligule long, spikelets long 4–6-fld. in a large terminal or axillary racemose leafy panicle with papery bracts, fl. gls. distant ovate long-acuminate.

SIKKIM HIMALAYA & the KHASIA HILLS, alt. 3–5000 ft., *Griffith, Kurz, Mann,* &c.

A small shrubby bamboo; *stem-sheaths* unknown. *Leaves* 6–8 by $\frac{7}{10}$–1 in., base rounded or narrowed, petiole very short, midrib rather broad, principal nerves 5 pairs, with lines of pellucid glands between the secondary, transverse nervules few or 0; sheath greenish yellow, striate, glabrous, ending in a broad 2-fid callus, and produced upwards to meet the long striate obtuse fimbriate ligule. *Spikelets* $\frac{1}{2}$–$\frac{7}{10}$ in., rachilla clavate; gls. I and II ovate, acuminate, 5–7-nerved, keeled and ciliate above; fl. gls. about twice as long, 7–9-nerved, ciliate; palea longer, mucronate, tip 2-fid, 1-nerved between and 1-nerved on each side of the ciliate keels.

6. **A. debilis,** *Thw. Enum. Pl. Zeyl.* 375; shrubby, stems much branched, leaves small linear-lanceolate acute obscurely or not tessellate tip scabrous base acute or subtruncate, ligule short, spikelets short 3-fld., shortly pedicelled in a terminal short leafy panicle, fl. gls. imbricating ovate mucronate. *Munro in Trans. Linn. Soc.* xxvi. (1868) 24; *Bedd. Fl. Sylv., Forest. Man. p.* ccxxx.; *Trim. Cat. Ceyl. Pl.* 110; *Gamble Bamb. Brit. Ind.* 7, t. 6.

CEYLON; Central Province, alt. 6–8000 ft., *Thwaites*, &c. (C.P. n. 1).

Stems elongate; nodes rather enlarged, internodes 2–6 in. by $\frac{1}{5}$–$\frac{8}{10}$ in. diam., upper smooth yellow shining, lower glabrous or top hispid with long hairs. *Leaves* $1\frac{1}{2}$–3 by $\frac{1}{5}$–$\frac{1}{3}$ in., glaucous, glabrous, or hairy above glabrous beneath, one or both margins scabrous; midrib thick, primary nerves 2–3 pairs, obscure, transverse nervules obscure or 0; sheath glabrous, striate, paleaceous, ending in a ciliate callus and shortly auricled, with 2–4 short bristles. *Spikelets* $\frac{1}{2}$ in., pedicels often obcuneate, glabrous or slightly pubescent; gls. I and II ovate, mucronate, 5–7-nerved; fl. gls. similar but longer; palea 2-cuspidate, hirsute, tip ciliate, keels smooth.

††† *Spikelets racemose.*

7. **A. densifolia,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 32; small, densely gregarious, leaves leathery densely imbricate subsessile lanceolate acute or long-acuminate spinulose-serrate tessellately nerved, base rounded or cordate, spikelets 1-fld. in a dense panicle of leafy branchlets bearing racemes of 5–6 spikelets, fl. gl. long-mucronate. *Trim. Cat. Ceyl. Pl.* 110; *Gamble Bamb. Brit. Ind.* 8, t. 7.

Travancor; on the Anamallay Hills, alt. 8500 ft., *Beddome*. Ceylon; Horton Plains, alt. 7200 ft., and Pedrotallagalla, *G. Thomson*, *Maxwell*, *Trimen*, &c.

Stem 6 in.–3 ft., with stiff strong leafy branches arising from a thick scaly rhizome; internodes 1$\frac{1}{2}$–3 in. by $\frac{1}{3}$ in. diam. or less, smooth, walls rather thick; stem-sheaths 1 in. or longer, striate, hirsute, narrowed to the truncate acutely 2-auricled top; blade short, ovate. *Leaves* 1-1$\frac{1}{2}$ by $\frac{1}{5}$–$\frac{1}{3}$ in., tip glabrous, margins broadly cartilaginous, midrib thick, primary nerves 1–2 obscure, secondary 4–5 regularly tessellate with nervules; sheath striate, ciliate with whitish stiff hairs above; ligule short, rounded, hairy. *Spikelets* $\frac{4}{10}$–$\frac{1}{2}$ in., rachilla glabrous; gl. I short, lanceolate; II broader, 5-nerved, keel scabrous; palea 2-mucronate, with a faint nerve outside each scabrid keel. *Lodicules* obovate, fimbriate. *Anthers* long. *Ovary* ellipsoid.

8. **A. racemosa,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 17; stem erect from a long rhizome, internodes scabrous, leaves linear-lanceolate tessellate tip setaceous, margins scabrous-serrulate, spikelets 4–8-fld. on short racemes of a simple terminal panicle of close leafy whorled branches surrounded by persistent sheaths, flg. gls. caudate-acuminate from a broad base ciliate. *Gamble Bamb. Brit. Ind.* 9, t. 8; *Mitford, The Bamboo Garden*, 174. A. Gammieana, *Gamble mss.* (an Alpine form).

E. Nepal and Sikkim, alt. 6–12,000 ft.

Stems 5–15 ft. by $\frac{7}{10}$–2 in. diam., walls thin, nodes a mere ring; internodes 12–15 in., blue-green when young; branches fascicled at the nodes; stem-sheaths usually 10 in., striate, covered with scattered stiff black hairs, narrowed convexly to the truncate tip; blade subulate, reflexed. *Leaves* 4–7 by $\frac{1}{2}$–$\frac{2}{3}$ in., base rounded or narrowed into the very short petiole, glabrous or sparsely hairy above, midrib prominent, primary nerves 3–5 pairs, secondary 5–7, transverse nervules conspicuous; sheath 2-auricled with a ciliate membrane below the blade; ligule short, obtuse. *Panicle* with a glabrous rachis, pedicels 1–1$\frac{1}{2}$ in., wavy, angular. *Spikelets* 1–1$\frac{1}{2}$ in., rachilla clavate; gl. I and II very small, distant, acuminate; flg. gls. 7–9-nerved, setaceous, tip scabrid; palea shorter, 2-mucronate, tip scabrous, keels ciliate, nerves 0 or obscure.—Flowers rarely and only in the higher elevations, when the stem is sometimes reddish.

** Nodes of stem spinous (except *A. Pantlingi*).

9. **A. Griffithiana,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 20; gregarious, internodes furrowed, nodes girt with a ring of tawny hairs, leaves thin linear-lanceolate acuminate tessellate margins smooth, tips setaceous, spikelets 4–6-fld. in whorled clusters on a terminal panicle which is surrounded by sheathing bracts, pedicels hairy, flg. gls. lanceolate long-mucronate. *Gamble Bamb. Brit. Ind.* 10, t. 9.

British Bhutan, *Pantling*. Khasia and Jaintea Hills, alt. 3–4500 ft., *Griffith*, &c.

Stems 10–30 ft. by 1–1$\frac{1}{2}$ in. diam., olive-green; spines short, stout; internodes

7–9 in., stem-sheaths 6–9 in. by 4–5 in. broad at the base and $\frac{3}{10}$ in. at the top, with a basal belt of thick soft tawny hairs, narrowed upwards, tip with rounded auricles, thinly covered with stiff tubercle-based hairs; blade $\frac{1}{5}$ in., triangular, acute, hairy. *Leaves* 4–5 by $\frac{1}{2}$ in. or less, narrowed into a petiole, margins smooth, midrib shining, primary nerves 4–5 pairs, transverse nervules strong; sheaths striate, glabrous, ending in a narrow ring with a few stiff curved bristles; ligule rather broad, hairy. *Panicle* with a hairy rachis, laterally flattened. *Spikelets* 1–$1\frac{1}{2}$ in., narrow; rachilla long, flattened, top clavate, ciliate; gls. I and II ovate-lanceolate, mucronate, 5–7-nerved, scabrous, dorsally hairy above; fl. gls. $\frac{1}{2}$ in., scabrous, hairy above, 7-nerved; palea 2-mucronate, keels ciliate. *Anthers* with bearded tips.—Only once seen in flower.

10. **A. Pantlingi,** *Gamble Bamb. Brit. Ind.* 129, t. 118; tall, spines 0? nodes with a hairy ring, leaves lanceolate petioled tessellate smooth above scabrid on one margin, tip long twisted scabrid, spikelets panicled surrounded by sheathing bracts, pedicels glabrous capillary, nodes glandular, spikelets very narrow curved 6–10-fld., rachilla clavate with a tuft of white hairs beneath the ovate acuminate long-mucronate flg. gls.

BRITISH BHOTAN; on Rechi La, alt. 11,000 ft., *Pantling.*

Stems upwards of $\frac{1}{2}$ in. diam., smooth; internodes 7–8 in. or more, cavity large; stem-sheaths about 10 in., smooth, striate, tapering to a convex top, margins long-ciliate; blade 3–4 by $\frac{1}{5}$–$\frac{1}{3}$ in., glabrous, decurrent on the sheath into hairy auricles bearing 6–10 long curved bristles; ligule about $\frac{1}{10}$ in., toothed, faintly ciliate, dorsally pubescent. *Leaves* 5–7 by $\frac{1}{2}$–$\frac{3}{4}$ in., base narrowed, petiole $\frac{1}{5}$–$\frac{1}{3}$ in., midrib narrow pale shining, nerves 4–5 pairs with 7–9 intermediate pairs, cross-nervules very many, sheath glabrous, ending in a very hairy ring with a few twisted bristles, margins long-ciliate; ligule dorsally pubescent. *Panicles* 4–6 in., terminal and axillary on leafless branches; bracts like small stem-sheaths, glabrous. *Spikelets* 2 in. or more, subverticillate; uppermost flg. gls. usually empty; rachilla about $\frac{1}{3}$ in., white-pubescent; gls. I and II empty, I $\frac{1}{5}$ in.; II nearly $\frac{1}{2}$ in., 3–5-nerved, subciliate; flg. gls. prominently 7-nerved, keels scabrid; palea with 2-ciliate keels alternating with 3 nerves, tip 2-fid and 2-mucronate. *Lodicules* 3, ovate or obovate, acute, ciliate. *Anthers* linear, acute. *Ovary* glabrous, style short; stigmas 3, long, plumose. *Grain* oblong, dark brown, grooved, tipped with the style-base.—Differs from *A. Griffithiana* in wanting spines, in the different stem-sheaths, large leaves, longer spikelets, and glabrous anther tips.

11. **A. callosa,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 30; internodes smooth, nodes girt by the base of the fallen sheath, leaves thin oblong-lanceolate acuminate tessellate glandular-scabrid above pubescent beneath, margins scabrous-serrulate, spikelets bracteate 6–12-fld. in a branched axillary panicle ending in a leafy branchlet, flg. gls. ovate acute mucronate. *Gamble Bamb. Brit. Ind.* 12, t. 10.

EASTERN HIMALAYA; in the Duphla Hills, alt. 4500–6800 ft., *Lister.* KHASIA HILLS, alt. 6000 ft., *J. D. H. & T. T.*, &c.

Stem 12–20 ft. by $\frac{1}{2}$–1 in. diam., smooth; nodes spinous and with a ring of soft brown hairs; internodes 6–10 in., walls above the spinous thickened nodes thin; stem-sheaths as long as the internodes or longer, thin, transversely nerved, narrowed from a softly hairy base to a narrow truncate tip; blade $\frac{1}{2}$–1 in., subulate, hairy on both surfaces, auricles short fringed decurrent. *Leaves* 8–9 by $\frac{1}{3}$–$1\frac{1}{3}$ in., narrowed from a suboblique base to the very short petiole, tip scabrous, midrib hairy shining above, primary nerves 5–8 pairs, transverse nervules raised beneath with interposed pellucid glands; sheath densely tawny-pubescent, at length glabrous, tip with a ciliate callus and a few stiff curved bristles; ligule short, hairy. *Panicle* with the rachis striate, flattened on one side, and with a pubescent vertical line, terminal joints clavate, hairy; bracts narrow, straw-colrd. *Spikelets* 2–3 in., rachilla very prominent, glabrous; gl. I and II short, ovate, acute, glabrous, 1–3-nerved; flg gls. ovate, 3–7-nerved, tip ciliate; palea acute, thickly pubescent, keels ciliate. *Anthers* short, obtuse.

Sect. II. Erect shrubs. *Infl.* of fascicled racemes on leafless or on both leafy and leafless stems; bracts small.

12. **A. falcata,** *Nees in Linnæa*, ix. (1834) 478; stems annual, internodes smooth, nodes swollen, leaves small linear shortly petioled scabrid glandular between the nerves, above not tessellate tip setaceous twisted, infl. of fascicled falcate racemes at the nodes, bracts short narrow membranous, flg. gls. 1–2 subacute mucronate 7–9-nerved, tips ciliate. *Gamble Bamb. Brit. Ind.* 12, t. 11, 12; *Mitford, The Bamboo Garden*, 167. ? A. utilis, *Clegh. in Journ. Agr. Hort. Soc. Ind.* xiii. (1865) 388.

WESTERN HIMALAYA; from the Ravi to Nepal, alt. 4–12,000 ft. (rarely over 7000 ft.).

Stems 6–10 ft. from a woody rootstock, $\frac{1}{3}$–$\frac{1}{2}$ in. diam., green, sometimes pruinose; nodes glabrous or hirsute; internodes 6–12 in., walls thin; stem-sheaths papery, often 12 by 3 in., glabrous and scaberulous above, hairy beneath above the middle, margins ciliate, tapering to a truncate tip; blade $\frac{1}{2}$–2 in. by $\frac{1}{10}$ in., subulate recurved; ligule often $\frac{1}{2}$ in., toothed. *Leaves* about 3–4 by $\frac{1}{5}$–$\frac{1}{3}$ in., or 12 by 1 in. on young shoots, glands in rows like nervules pellucid; sheath glabrous; ligule long. *Panicles* on separate stems. *Spikelets* $\frac{1}{2}$–$\frac{2}{3}$ in.; rachilla cuneate, tip hairy; gl. I $\frac{1}{3}$ in., 3–5-nerved; II longer, 7–9-nerved, tip acute ciliate; fl. gls. $\frac{1}{2}$ in., mucronate, scabrous; palea = fl. gl. or rather longer (margins of gl. and palea often black).—There are two vars.: *α. typica*, Gamble, spikelets distant in filiform falcate racemes; *β. glomerata*, Gamble, spikelets 3–4 together in close racemes or panicles.—*A. utilis*, Clegh., may be *falcata* or *spathiflora*.

13. **A. khasiana,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 28; stems annual, dark green or blackish, nodes prominent, branchlets fascicled dark colrd., leaves 3–4 by $\frac{1}{3}$ in. linear-lanceolate glandular between the nerves not or hardly tessellate, infl. of fascicled falcate geniculate panicles at the nodes, bracts short ovate, fl. gl. mucronate, margins above and tip ciliate. *Gamble Bamb. Brit. Ind.* 15, t. 13.

KHASIA HILLS; alt. 5–6000 ft., common.

Most difficult to separate from *A. falcata*, but a stiffer stronger plant, panicle more dense and imbricated, flowers shorter, rachilla of spikelet hairy.

14. **A. intermedia,** *Munro in Trans. Linn. Soc.* xvi. (1868) 28; stems 8–12 ft. slender, nodes swollen with a prominent ring and whitish line below them, leaves very variable 8 by 1 in. (in young shoots to 3–4 by $\frac{1}{2}$ in.) linear- or oblong-lanceolate setaceously acuminate, base narrowed into a swollen petiole, nerves 3–7 pairs with 6–7 intermediates, sparingly tessellate with interposed pellucid glands, sheath ciliate with falcate auricles, infl. of whorled racemose panicles, bracts axillary triangular, spikelets 3–5-fld., fl. gls. 7–9- nerved. *Gamble Bamb. Brit. Ind.* 15, t. 14.

SIKKIM HIMALAYA, alt. 4–7000 ft., *J. D. H.*, &c.

Stems greyish-green; internodes 5–10 in, walls $\frac{1}{10}$–$\frac{1}{5}$ in. thick; stem-sheaths 8–10 by 1–2 in. at base, glabrous, striate, narrowed upwards and truncate, ciliate below the small subulate blade. *Leaves* bright green, upper surface and margins scabrid, midrib prominent; sheath with long marginal hairs, a minute ciliate callus below the petiole and on each side a falcate auricle bordered by stiff curved bristles; ligule long. *Infl.* on leafless stems. *Spikelets* $\frac{1}{2}$–1 in., yellow or purplish, nodes of rachilla clavate long-ciliate; gl. I and II ovate, membranous.—The long ciliate leaf-sheath is an excellent character.

15. **A. Hookeriana,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 29; stems 15–20 ft. slender, nodes not much swollen ringed by the base of the sheath, leaves 6–12 by ½–1½ in. narrowed into a swollen petiole, nerves 4–8 pairs with oblique transverse pellucid glands not tessellate, sheath glabrous minutely ciliate, ligule long, infl. of loosely fascicled falcate bracteate panicles, spikelets drooping 1-fld., fl. gl. large broadly ovate 3-nerved. *Gamble Bamb. Brit. Ind.* 17, t. 15.

EASTERN HIMALAYA, alt. 4–7000 ft.; Sikkim and W. Bhotan, *J. D. H.*, *Gammie*, &c.

Stems 15–20 coespitose, glaucous green, with white scurf when young; older internodes 8 by ⅔–1½ in., with a dark blueish ring at the top, often striped green and yellow, walls $\frac{1}{10}$ in. thick; stem-sheaths often 12–24 in. by 3–6 in. broad at the base, narrowed upwards and truncate; blade 3–6 in., linear; ligule $\frac{1}{10}$–⅕ in., depressed in the middle. *Leaves* glaucous green when young, upper surface and margins scabrid; sheath ending in a broad callus and thin naked membrane. *Infl.* loose, on separate stems. *Spikelets* about ⅓ in., pedicelled; gl. I $\frac{1}{10}$ in., 3-nerved, tip hairy; II ⅕ in. 5-nerved, mucronate; fl. gl. hard, involute, angled, scabrous between the nerves; palea glabrous, tip hirsute. *Grain* ellipsoid.

Sect. III. Erect shrubs. Inflorescence usually in leafy panicles; bracts large.

16. **A. spathiflora,** *Trin. in Mem. Acad. Petersb. Ser.* VI. iii. II. (1835) 617, *Sp. Gram. Ic.* t. 350; stem-sheaths oblong tip rounded, leaves 2–4 at the end of the branches, 3–5 by ⅓–½ in. linear-lanceolate tessellate, sheath loose, bracts enclosing 2–3 compressed 4–8-fld. spikelets, gl. I short obtuse, II long-mucronate, flg. gls. 4–5 ovate long-acuminate, palea very short. *Ruprecht. Bamb.* 24, t. 2, f. 5; *Steud. Syn. Gram.* 334; *Brandis in Ind. Forester,* xii. 206; *Gamble Bamb. Brit. Ind.* 17, t. 16; *Mitford, The Bamboo Garden,* 172. A. procera, *Wall. mss.* Thamnocalamus spathiflorus, *Munro in Trans. Linn. Soc.* xxvi. (1868) 34, *partly*; *Brandis For. Flor.* 563. Bambusa macro, *Wall. in Herb. Hook.* (*ex Munro*).—*Gen. Nov. Wall. Cat.* n. 5041.

WESTERN HIMALAYA; from the Sutlej to Nepal, alt. 7–9000 ft., *Wallich*, &c.

A gregarious shrub 12–20 ft. high. *Stem* ½–¾ in. diam., smooth, young glaucous green and scurfy, older yellow or reddish-brown, nodes prominent, internodes 6–15 in., branchlets chiefly from the upper nodes, leafing branches with loose yellow sheaths 3–5 by ⅓–⅔ in. *Stem-sheaths* loose, glabrous, margins ciliate, mouth ½–¾ in. broad, with a few stiff bristles; ligule $\frac{1}{10}$ in., fimbriate. *Leaves* shortly petioled, base narrowed, tip acute hairy; sheath 2–3 in., truncate, auricles bristly callus narrow, ciliate; ligule long-ciliate. *Infl.* usually on leafless stems, branches fascicled drooping, with narrow papery sheaths, 1½–3 in. long. *Spikelets* 1–2½ in., pedicelled; rachilla long, clavate, tip hairy; gl. I and II linear-lanceolate, glabrous; fl. gls. ½–1 in. scabrous.—Distinguished from *A. falcata* by the tessellate leaves, and from *jaunsarensis* by the short rhizomes and tufted habit.

17. **A. aristata,** *Gamble Bamb. Brit. Ind.* 18, t. 17; stem-sheaths narrowed to a broad rounded top, leaves fascicled on jointed purple branchlets oblong-lanceolate tessellate, sheath loose keeled with a thickened spongy callus below the petiole, bracts of infl. broad enclosing 3–5 compressed 4–8-fld. spikelets, gl. I and II oblong-lanceolate scabrous 5–7-nerved, fl. gls. ovate long acuminate, palea nearly as long. Thamnocalamus spathiflorus, *Munro in Trans. Linn. Soc.* xxvi. (1868) 34, *partly.*

SIKKIM and BHOTAN HIMALAYA, alt. 9500–11,000 ft., *Griffith's Collectors, Kurz,* &c.

A gregarious shrub 8–12 ft. high, very closely allied to *A. spathiflora,* of which it is the Eastern representative, distinguished from that species in having broader bracts enclosing more spikelets, shorter leaves, a hairy callus below the longer petiole, longer mucros of the flg. gls. and a long more acuminate palea. It is readily recognized by its yellow stems and reddish branchlets. The stems are leafing only, or flowering only, or both.

18. **A. Falconeri,** *Benth. in Gen. Plant.* iii. 1208; stem-sheaths oblong top narrowed truncate, leaves 3–6 by ½–¾ in. oblong-lanceolate soft thin petioled not tessellate but with a few pellucid glands, sheath glabrous with ciliate margins and a minute narrow ciliate callus below the petiole, ligule long hairy, bracts of large leafy panicles ovate-lanceolate, spikelets 1-fld., gl. I and II oblong acute or mucronate 3–5-nerved, fl. gl. ovate-lanceolate mucronate 5–7-nerved, palea as long or longer. *Gamble Bamb. Brit. Ind.* 20, t. 18; *Mitford, The Bamboo Garden,* 169. Thamnocalamus Falconeri, *Hook. f. ex Munro in Trans. Linn. Soc.* xxvi. (1868) 1834; *Brandis For. Fl.* 563. Bambusa floribunda, *Munro in Herb. Trin. Coll. Dublin.*—Bambusoides, *Wall. Cat.* n. 5040.

TEMPERATE HIMALAYA; from Kumaon to Bhotan, alt. 7–9000 ft., *Wallich,* &c.

Tall, shrubby. *Stem* ½–¾ in. diam., young smooth, old scurfy-white, often striped yellow and green; nodes raised, base of sheath persistent; internodes 8–15 in., walls ⅐ in. thick; branches many at the nodes with bracteate sheaths. *Stem-sheaths* 8–12 by 2–3 in.; ligule narrow, dark, hairy. *Leaves* smooth on both sides, ligule rounded hairy. *Rachis* of raceme flexuous, flattened. *Spikelets* with a terminal free rachilla, and a ring of hairs below the flg. gl.; keels of palea glabrous except at the tip, 1-nerved on each side.—The small sheaths enclosing short sinuous racemes, and the absence of transverse nervules in the leaves characterize this species.

Sect. IV. Climbing shrubs. *Stamens* 6 or fewer.

19. **A. Prainii,** *Gamble Bamb. Brit. Ind.* 21, t. 19; stem slender wiry, leaves 2–4 by ⅓–¾ in. not tessellate, sheath with a glabrous callus below the petiole, spikelets distant pedicelled on a wiry rachis, gl. I lanceolate keeled ciliate, II ovate acute 5-nerved, flg. gls. 3–6 on a flexuous clavate rachilla triangular acute 9–11-nerved. Microcalamus Prainii, *Gamble in Journ. As. Soc. Beng.* lix. ii. (1891) 207, t. 7.

ASSAM; on the Naga and Jaintea Hills, alt. 3500–7870 ft., *Prain,* &c.

Stem up to 30 ft. long, yellowish, ⅕–⅓ in. diam.; nodes swollen, solid or walls thick; branches fascicled. *Stem-sheaths* 2–6 by ⅓–¾ in., narrowed to a point in the upper half with an acicular blade. *Leaves* 2–4 in. thin, quite glabrous, base rounded petioled, tip curved setaceous; sheath smooth; ligule long, rounded. *Infl.* of axillary and terminal panicles of spikelets in the axils of sheathing bracts. *Spikelets* 1–1½ in., pedicels slender; empty gls. 2–3, nodes of rachilla clavate flattened; gl. I margins ciliate; II tip ciliate; fl. gls. falcate, strongly nerved; palea as long, falcate; keels minutely ciliate. *Stamens* 6.

B. Species of which the flowers are unknown.

* Stem-sheaths 2–8 in., imperfect blade generally recurved.

† Leaves tessellate with transverse nervules.

§ *Stems tufted on a short rootstock.*

20. **A. microphylla,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 32;

stems 2–4 ft., leaves $\frac{1}{2}$–1 by $\frac{1}{10}$–$\frac{1}{5}$ in. linear-lanceolate acute mucronate tessellate, sheath hairy above tip long-fimbriate. *Gamble Bamb. Brit. Ind.* 22. Bambusa microphylla, *Griff. Journ.* i. 242, 259, &c.

Bhotan, alt. 6–10,000 ft., *Griffith.*

A gregarious low shrub, forming large patches in wet places; internodes 2–3 in., glabrous; branches $\frac{1}{2}$-whorled at the nodes. *Leaves* with almost membranous fimbriate or glabrous margins, nerves 2 pairs; sheath often dark; ligule obscure.—Descript. after Munro.

21. **A. hirsuta,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 30; stems 4–8 ft. solitary from the rhizome often strigosely hairy above, leaves 3–5 by $\frac{1}{2}$–$\frac{2}{3}$ in. tessellate strigosely hairy beneath, sheath strigosely bristly ending in a hairy callus and reflexed spinescently bristly auricle. *Gamble Bamb. Brit. Ind.* 22, t. 20.

Khasia and Naga Hills, alt. 5000–9500 ft., *Griffith*, &c.

Stems greyish-green, $\frac{1}{5}$–$\frac{1}{3}$ in. diam., nodes glabrous; internodes up to 13 in., walls rather thin. *Stem-sheaths* 6 in. by 1 in. broad at the base, top rounded with large recurved long-ciliate auricles; blade subulate, recurved; ligule narrow, pubescent. *Leaves* tessellate, smooth above, hairs white beneath, margins cartilaginous scabrous-serrate, midrib narrow shining, nerves 4–6 pairs; ligule long, hairy.—Resembles *A. Wightiana*, differing in the well marked auricles and bristles of both stem- and leaf-sheaths.

22. **A. Gallatlyi,** *Gamble Bamb. Brit. Ind.* 23, t. 21; stems thin, leaves 3–4 by $\frac{1}{2}$–$\frac{3}{4}$ in. tessellate whitish beneath base narrowed into a short petiole sheath ending in a narrow callus with about 3 long stiff bristles.

Tenasserim; Moolyet Hill, alt. 6000 ft., *Gallatly.*

A gregarious shrub. *Branches* smooth, glabrous, striate, sometimes channelled. *Sheaths* of branchlets narrow, with imperfect blades and long ligules. *Leaves* pale green, tessellate, tips setaceous, scabrid, smooth above, one margin scabrid, nerves 3 pairs; ligule triangular, pubescent.

§§ *Stems distant on elongated rhizomes.*

23. **A. jaunsarensis,** *Gamble Bamb. Brit. Ind.* 23, t. 22; stems slender reed-like, leaves 4–6 by $\frac{1}{2}$–$\frac{3}{4}$ in. lanceolate acuminate tessellate base obliquely cuneate, sheath ending in falcate auricles with a few bristles.

Western Himalaya; hills of Jaunsar in Garwhal, alt. 7–8000 ft., *Gamble.*

Rhizome long, creeping, clothed with shining imbricate ovate acute scales. *Stems* 2–3 ft. apart, 10–15 ft. high, $\frac{1}{2}$ in. diam., young glaucous, old greenish-brown, internodes 9–11 in. *Stem-sheaths* 6–10 in. by 1$\frac{1}{2}$–2 in. broad at the base, narrowed to a truncate 2-auricled bristly tip; blade 1–3 in., subulate, recurved; ligule short, pubescent. *Leaves* thin, smooth above, scaberulous beneath, margins scabrous-serrate, tessellate, nerves 4–5 pairs; sheath with falcate auricles that bear 5–6 stiff bristles; ligule short, truncate, pubescent.—Nearest to *A. spathiflora*, distinguished by its rhizome, solitary green stems, auricled sheath, and thinner leaves.

24. **A. Rolloana,** *Gamble Bamb. Brit. Ind.* 24, t. 23; stems rather rough somewhat flattened on one side, lower nodes rooting, leaves 6–8 by 1–1$\frac{1}{2}$ in. oblong-lanceolate acute tessellate base rounded sparsely hairy beneath, sheath ending in a rounded long-ciliate auricle.

Assam; Naga Hills, alt. 5–7000 ft., *J. Rollo.*

Rhizome at first clothed with imbricating scales, afterwards jointed, joints about $\frac{1}{2}$ in. long. *Stems* 8 ft. by $\frac{1}{5}$–$\frac{1}{2}$ in. diam., green then yellow, lower nodes rooting;

internodes 10–12 in., walls thin. *Stem-sheaths* 4–6 by 1–2 in., covered with at length deciduous bristles, shining, margins ciliate, auricles falcate and with long bristles, blade subulate recurved. *Leaves* glabrous above, tessellate, margins cartilaginous spinulose-scabrous, nerves 8–10 pairs; petiole broad, flat; ligule long, membranous, deeply cleft. Remarkable for its broad leaves.

25. **A. armata,** *Gamble Bamb. Brit. Ind.* 130, t. 119; rootstock creeping, stems solitary, nodes smooth slightly thickened, leaves oblong-lanceolate long-acuminate tessellate smooth above slightly rough beneath, margins scabrid, midrib pubescent above.

Hills of UPPER BURMA, alt. 5500 ft., *Oliver.*

Evergreen. *Stems* about 20 ft. by 1–1¾ in. diam., green, straight, smooth, walls very thin; nodes with a belt of straight smooth spines, internodes about 8 in.; stem-sheaths 6–8 in. by 2½–3 in. broad at the base, thin, tapering to a very narrow tip, smooth or with scattered hairs above the middle, margins ciliate; blade about ⅒ in., triangular, pubescent; ligule very narrow, ciliate. *Leaves* 6–9 by ¾–1¼ in., bright green, base narrowed, petiole ⅒–⅕ in., tip twisted scabrid, midrib narrow pale shining, nerves 6 pairs with 5–7 intermediate, transverse nervules very many irregularly spaced; leaf-sheaths striate, ending in small calli and bearing 10–12 stiff bristles; ligule very short, ciliate. *Inflorescence* unknown.—Near *A. callosa*, Munro, but quite distinct.

†† Leaves not or inconspicuously tessellate by transverse nervules.

26. **A. suberecta,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 32; stems cœspitose wiry erect, leaves narrow 2–4 by ⅕–⅓ in. subsessile linear not or hardly tessellate, base narrowed margins revolute, sheath ending in a callus with a few deciduous bristles. *Gamble Bamb. Brit. Ind.* 25, t. 24.

SIKKIM HIMALAYA, *Kennedy.* KHASIA and JAINTEA HILLS, alt. 4000–5000 ft. *Griffith*, &c.

Stems 10–15 ft. by ⅓ in. diam., olive-green, smooth; nodes slightly swollen; internodes 6–10 in., walls thick; branchlets short, whorled. *Stem-sheaths* 2–6 by ½ in. broad at base, glabrous, gradually narrowed to a naked or fimbriate mouth; blade ½–1½ in., subulate, recurved; ligule long, tip fimbriate. *Leaves* pale beneath, with many pellucid glands, tip setaceous, margins scabrous-serrate, nerves 3–4-pair; ligule rather long, pubescent.

27. **A. Kurzii,** *Gamble Bamb. Brit. Ind.* 25, t. 25; nodes with a thick ring bearing very many long wiry geniculate branches, leaves 2–4 by ⅕–⅓ in. subsessile very thin linear-lanceolate acute obscurely tessellate, base unequally narrowed, sheath slender striate, ending in a small callus and a few thin cilia.

SOUTHERN BURMA; on the coast, *Kurz.*

Apparently a bushy shrub. *Stem* smooth, ⅓–½ in. diam. *Leaves* acute with a short point, smooth on both surfaces with a few long tubercle-based hairs on the nerves beneath, costa thin pale, nerves 2 pairs, transverse nervules very few and inconspicuous; ligule short sometimes ciliate.—Remarkable for its thin leaves and geniculate pale branchlets.

** Stem-sheaths 12–18 in. long, blade long.

28. **A. Mannii,** *Gamble Bamb. Brit. Ind.* 26, t. 26; stem tufted climbing wiry solid, blade of stem-sheath 6–10 in. linear, leaves 6–9 by ¾–1 in. petioled lanceolate hirsute beneath not tessellate.

ASSAM; Jaintea Hills, alt. about 3000 ft., *Mann.*

Stems 30 ft., much branched, nodes thickened, branches many geniculate; internodes 3 ft., smooth. *Stem-sheaths* 12–18 in., convolute, slender; rough with appressed bristles; ligule narrow, toothed. *Leaves* papery, base narrowed or rounded, tip thickened hirsute surmounted by a capillary bristle; sheath ending on one side in a round shining exauricled callus, on the other in a short pointed auricle with a few bristles; petiole wrinkled; ligule small, hairy, ciliate.—A curious species resembling *A. Prainii*, remarkable by its long narrow sheaths; its leaves resemble those of *Cephalostachyum.*

133. **PHYLLOSTACHYS,** *Sieb. & Zucc.*

Cœspitose shrubs. *Stems* smooth, flattened on one side, branches fascicled at the nodes. *Stem-sheaths* rounded above, blade subulate. *Leaves* jointed on the sheath, spinulose on one margin, tessellate, sheath loose. *Infl.* of spicate branchlets in a leafy terminal panicle with imbricating bracts. *Spikelets* 2–3, 1–4-fld. with a terminal imperfect rachilla jointed between the fls.; empty gls. 2–3, many-nerved, often bearing an imperfect blade; flg. gls. ovate-lanceolate, acuminate, many-nerved; palea 2-keeled, many-nerved. *Lodicules* 2. *Stamens* 3. *Ovary* stipitate, rounded, glabrous, style long, stigmas 3.—Species about 20, Eastern Asiatic.

1. **P. bambusoides,** *Sieb. & Zucc. in Abh. Akad. Münch.* iii. (1843) 745, t. 5, f. 3; leaves thin, mouth of sheaths with long bristles. *Steud. Syn. Gram.* 339; *Munro in Trans. Linn. Soc.* xxvi. (1868) 36; *Franch. & Sav. Enum. Pl. Jap.* ii. 182; *Gamble Bamb. Brit. Ind.* 27, t. 27; *Mitford, The Bamb. Gard.* 155. P. megastachya, *Steud. l. c.* Bambusa reticulata, *Rupr. Bamb.* 58. B. bifolia, *Sieb. mss. ex Munro.*

UPPER ASSAM; Mishmi Hills (without flowers), *Griffith.*—DISTRIB. China, Japan.

Stems 10–12 ft., ½–⅔ in. diam., graceful, smooth, yellow, nodes glabrous, internodes short, branches semiverticillate. *Stem-sheaths* 6–10 in., thin, top contracted into a short neck then rounded and truncate, margins produced to meet the ligule with a few bristles; blade subulate; ligule long, toothed. *Leaves* 3–4 by ½–⅔ in., oblong-lanceolate, tip setaceous, glaucous and with stiff white hairs beneath, nerves 5–6-pairs; petiole black, hairy; sheath keeled, ciliate on one margin, mouth with bristles on a short auricle; ligule rounded. *Bracts of infl.* short, obtuse, sheathing 3–5 spikelets and with an imperfect blade. *Spikelets* 1–1⅕ in.; gl. I very large, sheath-like, truncate, with a green cordate blade; II oblique, keeled, few-nerved, keels ciliate; flg. gls. ¾ in., ovate, acuminate, many-nerved; palea as long.—Description from Hongkong specimens.

2. **P. Mannii,** *Gamble Bamb. Brit. Ind.* 28, t. 28; leaves thick, mouth of sheath nearly naked.

KHASIA HILLS, alt. 5000 ft., cult. (said to have come from the Naga Hills), *Mann.*

Stems 15–20 ft. by 1–1¼ in. diam.; internodes 8 in., yellow. *Stem-sheaths* papery, 8–9 by 1–2 in., top rounded and truncate; blade 2–3 in., subulate; ligule broad, pectinate. *Leaves* 4–5 by ½–¾ in., base rounded, tip shortly acuminate, glabrous or nearly so, one margin spinulose-serrate, costa prominent, nerves 5 pairs; sheath loose, ending in a narrow ciliate callus with a few bristles; ligule broad, long-pectinate. *Infl.* unknown.

134. **BAMBUSA,** *Schreb.*

Shrubs or trees, usually large and cœspitose, rarely climbing; stem-sheaths broad, blade often triangular. *Leaves* shortly petioled not tessellate by nervules, but sometimes by pellucid glands, sheaths variously auricled. *Infl.* generally a large leafless panicle bearing heads on spiciform branches, or of leafy panicles, or panicled spikes. *Spikelets* 1– many-fld.; lower gls. 1–4, empty or gemmiferous; fl. gls. ovate-lanceolate, uppermost imperfect; palea 2-keeled. *Lodicules* 2–3, membranous, ciliate, rarely 0. *Stamens* 6. *Ovary* oblong or obovate, tip hairy; style long or short, stigmas 2–3. *Grain* oblong or linear-oblong, furrowed on one side; pericarp thin, adherent.—Species about 50, Eastern Asiatic, Malayan, and one Australian.

In enumerating the nerves of the leaves the principal ones on each side of the midrib alone are given.

A. Species of which the flowers are known.

Sect. I. Arborescent (except *B. nana* and *affinis*). *Stem* not spinous. *Spikelets* cylindric, except *B. Balcooa. Lodicules* 3.

* Spikelets in loose heads.

† Stem-sheaths with a triangular reniform or cordate blade, auricles large.

§ *Keels of palea more or less ciliate or toothed.*

1. **B. Tulda,** *Roxb. Fl. Ind.* ii. 193; leaves linear-oblong or -lanceolate, spikelets 1–3 in. in interrupted clusters mixed with chaffy bracts usually 1–2 bracteolate 4–6-fld., lowest 3–4 gls. acute many-nerved usually gemmiparous, flg. gls. ½–1 in. ovate acute acuminate or mucronate, palea shorter cymbiform, anthers obtuse glabrous purple, ovary obovate-oblong. *Munro in Trans. Linn. Soc.* xxvi. (1868) 91; *Brand. For. Flor.* 566; *Kurz For. Fl. Burm.* ii. 552; *Gamble Bamb. Brit. Ind.* 30, t. 29. B. Macala, *Ham. ex Wall. Cat.* n. 5026 A. B. trigyna, *Roxb. mss. in Herb. Mus. Brit.* Dendrocalamus Tulda, *Voigt Hort. Suburb. Calcutt.* 718.—Bambusa, *Wall. Cat.* n. 5026 A, 5027, 5030 B, C.

Bengal, Assam, the Northern Circars, and Burma, wild and cult.

Gregarious. *Stems* 20–70 ft., 2–4 in. diam.; nodes not swollen; internodes 1–2 ft., white-ringed below the nodes, walls ⅓–½ in. thick. *Stem-sheaths* 6–9 by 6–10 in. broad below, narrowed upwards, tip rounded or subtriangular, glabrous hairy or white-powdered; blade hairy within, auricles long-fringed. *Leaves* 6–10 by ¾–1½ in., base usually rounded, tip subulate twisted, beneath glaucescent and puberulous, pellucid glands faint, nerves 6–10 pairs; petiole often hairy; sheath glabrous, ending in a smooth callus and oblong long-fringed auricle; ligule narrow, obscure. *Infl.* variable, from an immense radical leafless panicle to a short leafy panicle or spiciform branch; rachilla clavate, flattened, fragile; palea 5–7-nerved between the keels, tip penicillate. *Lodicules* 3.—Flowers gregariously and in single clumps.

2. **B. nutans,** *Wall. Cat.* n. 5031; stems solitary from a creeping rhizome, leaves linear-lanceolate tessellate with pellucid glands, ligule long obtuse hairy, spikelets in bracteate fascicles many empty or gemmiparous, fertile few ¾–1 in., 2–3 lowest gls. neuter 3–7 fertile all ovate acute mucronate many-nerved puberulous within, palea shorter ovate flattened keels overlapping long ciliate, anther-tips long apiculate or slightly penicillate, ovary subovoid. *Munro in Trans. Linn. Soc.* xxvi. (1868) 92; *Brand. For. Flor.* 567; *Gamble Bamb. Brit. Ind.* 32, t. 30. B. crinita, *Thoms. ex Munro l. c.* 157. Bambusa Falconeri, *Munro l. c.* 95 in part.—Bambusa, *Wall. Cat.* n. 5030 A.

LOWER HIMALAYA; from the Jumna to Assam and Eastern Bengal, ascending to 5000 ft. in Sikkim.

Stems 20–40 ft. by 1½–3 in. diam., graceful, naked below, straight, nodes not much raised often hairy, lower rooting; internodes 15–18 in., not shining, white-ringed below the nodes, thick-walled. *Stem-sheaths* 6–9 in., top roundly truncate, dorsally clothed with black hairs, base with a ring of soft deciduous hairs; blade of lower nodes and uppermost shoots 6–9 in., of middle nodes shorter, acute, black-hairy within, margins recurved, base rounded decurrent on the top of the sheath with large waved densely bristly auricles, bristles long curved. *Leaves* 6–12 by 1–1½ in., white beneath when dry, tip twisted scabrid, midrib and margins scabrid, nerves 7–10; sheath ending in a smooth callus and falcate auricle with long bristles. *Infl.* a stiff panicle with spiciform branches. *Lodicules* 3, long-fimbriate.—Difficult to distinguish from *B. Tulda* without flowers, except by the rhizome. *B. Falconeri*, Munro, was founded on flower of *B. nutans* and leaves of *Dendrocalamus Hamiltoni.*

3. **B. teres,** *Ham. ex Wall. Cat.* n. 5026 B; stems cœspitose, leaves large oblong-lanceolate tessellate by pellucid glands, spikelets 1–2 in. in bracteate heads neuter and fertile, 1–2 lowest gls. empty or gemmiparous ovate acute mucronate, flg. gls. 5–6 ovate-lanceolate from a broad base acute many-nerved tip sometimes foliaceous, palea ovate acute scaberulous 5–6-nerved between the toothed keels, anthers narrow tips penicillate. *Munro in Trans. Linn. Soc.* xxvi. (1868) 95; *Gamble Bamb. Brit. Ind.* 33, t. 31.

EASTERN BENGAL; Gongachora, *Hamilton.* ASSAM, *Jenkins.*

Stems 60 ft. by 3 in. diam., nodes ringed by the bases of fallen sheaths; internodes 20 in., walls $\frac{3}{10}$–$\frac{4}{10}$ in. thick. *Stem-sheaths* 8–10 in. long and broad, hardly narrowed upwards, top rounded, nearly glabrous; blade 4–6 in., triangular, cuspidate, base rounded and decurrent in broad wavy fringed auricles, appressed-hairy beneath; ligule narrow, white-hairy. *Leaves* 12–14 by 1½–1¾ in., tip long-acuminate twisted scabrid, base unequally narrowed shortly pubescent beneath, nerves 10–16, pellucid glands many; sheath ending in a broad shining callus; ligule short. *Infl.* a large compound panicle with spiciform branches bearing fascicles of spikelets and chaffy bracts. *Lodicules* sub-obovate, fimbriate, many-nerved.

4. **B. Ridleyi,** *Gamble Bamb. Brit. Ind.* 34, t. 32; leaves 12–14 by 1½–2 in. margins smooth, sheath exauricled, ligule deeply 2-lobed, spikelets 1–2 in. few in distant clusters 3–5-fld. many neuter, empty gls. 2–4 ovate acuminate, fl. gls. ovate-lanceolate mucronate many-nerved, palea shorter oblong keels minutely ciliate near the 2-fid tip, anthers long narrow setosely apiculate.

SINGAPORE, at Bukit Timah, *Ridley.*

Leaves oblong-lanceolate, tip subulate scabrid with its margins recurved, scaberulous above, smooth beneath, nerves 10–12 pair, petiole broad; sheath appressed hairy, subcarinate, ending in a narrow callus, margins truncate at the ligule which has long stiffy ciliate lobes. *Infl.* on long spiciform leafy branches bearing very distant clusters of few spikelets. *Rachilla* short. *Palea* many-nerved between the keels. *Lodicules* 3, many-nerved, long-fimbriate.—Habit and stem-sheaths unknown.

5. **B. burmanica,** *Gamble Bamb. Brit. Ind.* 35, t. 33; leaves of young plants 10–12 by ½–2 in. white-hairy on both surfaces of older smaller smooth above hairy beneath, ligule short, spikelets 1 in. or less in spiciform branches of a panicle each in the axil of a long narrow truncate bract, empty gls. 2 mucronate, flg. gls. 5–6 ovate acute many-nerved, palea elliptic-ovate keels ciliate, anthers narrow tips apiculate.

UPPER BURMA; Katha district, *Oliver*.

Stems 50–60 ft., 4 in. diam., dull green, nearly solid, internodes 12 in. with a ring of white hairs below the not much swollen nodes. *Stem-sheaths* green with yellow margins, rather broader than long, top rounded, sides with appressed golden hairs; blade broadly cordate, cuspidate, base dilated into large rounded fringed auricles; ligule short. *Leaves* oblong-lanceolate, base unequally narrowed or rounded, tip with a twisted scabrous point, pellucid glands many, nerves 5–8 pair; sheath reddish-brown, keeled, tip truncate with a small deciduous auricle and deciduous cilia; ligule short, denticulate. *Infl.* a panicle of spiciform branches; rachis wiry. *Palea* with overlapping margins and 4–5 nerves between the keels; rachilla short, thick. *Lodicules* 3, 5–6-nerved, ciliate. *Ovary* stipitate. *Grain* oblong, top hairy.—A large handsome species.

§§ *Keels of palea eciliate.*

6. **B. polymorpha,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 98; leaves small linear at first hairy on both surfaces, ligule very short, spikelets about $\frac{1}{2}$ in. few together in many bracteate fascicles born on the long spiciform branches of a large panicle, shining, each in the axil of a long bract, empty gls. 1–3 ovate acuminate, flg. 2–3 ovate mucronate many-nerved, palea rather longer lanceolate, anthers obtuse or apiculate. *Kurz For. Fl. Brit. Burm.* ii. 553; *Gamble Bamb. Brit. Ind.* 36, t. 34. Bambusa cyanostachya, *Kurz MS. in Herb. Kew.*

EASTERN BENGAL, PEGU & MARTABAN, *Brandis*, &c.

Evergreen, tufted, sometimes deciduous; stems attaining 50–80 ft. by 3–6 in. diam., curving outward, young white-scurfy, nodes thickened; internodes 15–24 in. *Stem-sheaths* 6–7 in. by 12–14 broad, thick, dorsally densely white-pubescent, narrowed upwards and curved; blade reniform, 3 in. long, plaited and long ciliate below, base rounded and dilating into a broad band lining the top of the sheath, auricles falcate, the whole fringed with bristles; ligule narrow, entire. *Leaves* 3–7 by $\frac{1}{3}$–$\frac{1}{2}$ in., base rounded or narrowed, nerves 4–6 pairs; sheath compressed, hairy, ending in a callus and minute auricle with deciduous bristles. *Spikelets* often brownish, subpedicelled, enclosed in a long curved glabrous bract. *Lodicules* 3, suborbicular. *Anthers* purple. *Grain* $\frac{1}{5}$ in., ovate, plano-convex, top hairy.

†† Stem-sheaths with a very long or narrow or imperfect blade, auricles 0 or minute; keels of palea ciliate.

7. **B. pallida,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 97; cœspitose, blade of stem-sheaths very long auricles small, leaves linear-lanceolate glabrous above often white-hirsute beneath, spikelets 1–1$\frac{1}{3}$ in. fertile and neuter on the spiciform branches of a large panicle, 1 or 2 lowest gls. ovate acute empty, then one male or gemmiparous followed by 3–8 flg. and 3–5 imperfect, flg. gls. ovate acute many-nerved, palea much shorter acute, anther-tip 1–2-setose or naked, ovary narrowed into the hairy style. *Gamble Bamb. Brit. Ind.* 37, t. 35. B. critica, *Kurz in Journ. As. Soc. Beng.* xlii. (1873) ii. 250. Dendrocalamus criticus, *Kurz For. Flor. Brit. Burm.* ii. 559.

SIKKIM HIMALAYA, N. & E. BENGAL, the KHASIA HILLS, ASSAM, UPPER BURMA & PEGU, alt. 5–6000 ft. (cult. in the plains below).

Stems graceful, 40–60 ft. by 2–3 in. diam., olive green; nodes not prominent; internodes 18–30 in., walls thin. *Stem-sheaths* 7–12 by about 10 in. broad, top straightly truncate, young more rounded, glabrous or hairy; blade up to 14 in., triangular, acuminate, sparsely hairy, margins and very small auricles bristly; ligule very narrow. *Leaves* 4–8 by $\frac{1}{2}$–$\frac{2}{3}$ in., tip subulate scabrid twisted, nerves 4–6;

sheath glabrous, ending in a smooth callus and a rounded erect fringed auricle; ligule very short. *Panicle* very large, pale. *Spikelets* pale, sometimes curved; rachilla short, clavate; palea 3–5-nerved between the keels. *Lodicules* 3. *Stigmas* 3. —Very like *B. Tulda*, but distinguished by the stem-sheaths, smaller narrow leaves, and ovary.

8. **B. affinis**, *Munro in Trans. Linn. Soc.* xxvi. (1868) 93; shrubby, blade of stem-sheaths small lanceolate, leaves lanceolate or oblong-lanceolate scabrid beneath tessellate by pellucid glands, sheath setose keeled, ligule broad, spikelets about 1 in. in small distant whorls on terminal leafy spikes or panicles 6–10-fld. coriaceous shining, flg. gls. acuminate very-many-nerved folded at the base, palea much narrower, ovary subobovoid. *Kurz For. Fl. Brit. Burm.* ii. 551; *Gamble Bamb. Brit. Ind.* 39, t. 36.

Forests of MARTABAN & BURMA E. of the Sittang river, *Kurz*, *Brandis*.

Stems 15–20 ft. by 1–1½ in. diam., pale green or striped with white, appressed-pubescent; internodes 1–2 in., tubular, with black hairs below the slightly thickened nodes. *Stem-sheaths* 4–6 in. long and broad, green, later straw-colrd., glabrous or with patches of appressed hairs, top rounded; blade 1–2 in., longer in young shoots, usually recurved, appressed hairy within, base decurrent as a narrow terminal wing of the sheath; ligule narrow. *Leaves* 6–10 by 1–1½, petiole rather long, points twisted scabrid, nerves 8–10; sheath ending in a short callus. *Spikelets* in small whorls; rachilla short, top bearded; palea 7-nerved between the keels, 4-nerved beyond them. *Lodicules* 3, many-nerved. *Stigmas* 3.

9. **B. khasiana**, *Munro in Trans. Linn. Soc.* xxvi. (1868) 97; stem solitary from a creeping rootstock, blade of stem-sheaths with large inflated wings above the contracted base, leaves lanceolate or oblong-lanceolate and sheaths glabrous, spikelets sterile (short) and flg. (long) $\frac{6}{10}$–$\frac{8}{10}$ in. in distant heads on the spiciform branches of a long panicle 1–4 lowest gls. empty or gemmiparous ovate mucronate strongly nerved, flg. gls. 2–3-fld 11–13-nerved, tip hairy within, palea as long as the gl. or longer many-nerved, anthers obtuse, ovary narrowed into the style. *Gamble Bamb. Brit. Ind.* 39, t. 37.

KHASIA to the MUNNEPORE HILLS, alt. 1–4000 ft., *J. D. H.* & *T. T.*, &c.

Stems 30–40 ft. by 1–1½ in. diam., graceful, fistular, rather soft, dull olive green, young golden hairy; internodes 5–15 in. with a whitish ring below the not prominent nodes and bluish ring above them; walls $\frac{1}{10}$–$\frac{3}{10}$ in. *Stem-sheaths* 5–6 by 4–5 in., tawnily hairy, straight top truncate; blade as long as the sheath or longer, cuspidately acuminate, auricles 0; ligule narrow. *Leaves* 4–9 by 1–1½ in., pale, tip setaceous shaggy, nerves 6–8 obscure; sheath ending in a broad callus and minute setose auricle; ligule elongate, truncate. *Spikelets* cylindric, at length flattened. *Branches* of *panicle* fistular. *Lodicules* short, broad, fimbriate. *Stigmas* 3.

9*. B. NANA, *Roxb. Fl. Ind.* ii. 190; dwarf, shrubby, blade of stem-sheaths linear, leaves small linear-lanceolate, spikelets ½–1½ in. few clustered or solitary on the branches of short diffuse panicles, gls. 5 or more all flg. rarely the lowest empty ovate acute many-nerved, palea shorter than the gl. keels minutely ciliate at or near the tip only, anthers obtuse or subapiculate yellow, ovary obovoid. *Wall. Cat.* n. 5036; *Munro in Trans. Linn. Soc.* xxvi. (1868) 89; *Kurz For. Fl. Burma*, ii. 551; *Ind. Forester*, i. 339; *Trim. Cat. Ceyl. Pl.* 110; *Gamble Bamb. Brit. Ind.* 41, t. 38. B. caesia, *Sieb. & Zucc. fid. Munro.* B. glauca, *Lodd. Cat.*; *Lindl. in Penny Cycl.* iii.

(1835) 357. B. glaucescens, *Sieb. Cat. fid. Munro.* B. sterilis, *Kurz in Miq. Ann. Bot. Lugd. Bat.* ii. 285. B. viridi-glaucescens, *Carr. in Rev. Hortic.* 1869, 292. Arundinaria glaucescens, *Beauv. Agrost.* 144; *Nees Agrost. Bras.* 526; *Kunth Enum. Pl.* i. 426; *Rupr. Bamb.* 23, t. i. p. 3; *Steud. Syn. Gram.* 334; *Miq. Fl. Ind. Bat.* iii. 413; *Munro l. c.* 22. Ischurochloa floribunda, *Büse in Miq. Pl. Jungh.* 390; *Fl. Ind. Bat.* iii. 422. Ludolfia glaucescens, *Willd. in Ges. Naturf. Fr. Berl. Mag.* ii. (1808) 320. Panicum arborescens, *Lamk. Encycl.* iv. 749. Triglossum arundinaceum, *Fisch. ex Roem. & Sch. Syst. Veg.* 846.

MALAYAN PENINSULA; Pahang, alt. 7000 ft., *Wray* (wild?). Cultivated in Ceylon (CP. n. 4022) and in many parts of India.—Native of China and Japan.

Stems 6–10 ft., $\frac{1}{2}$–1 in. diam., densely tufted, hard, green then yellow, branched from the base; nodes thickened; internodes 8–15 in. *Stem-sheaths* 4–6 by 2–3 in. broad, stiff, glabrous, narrowed upwards, top rounded; blade 2–3 in., acuminate, decurrent on the sheath, ciliate, appressed-hairy or glabrous above; ligule narrow, entire. *Leaves* 2–4 by $\frac{1}{2}$ in., distichous, tip subulate twisted, not tessellate, costa faint, nerves 3–6; sheath ending in a prominent callus, auricle fringed; ligule short. *Spikelets* straw-colrd.; rachilla flattened, glabrous; palea many-nerved. *Lodicules* linear. *Style* very short. *Grain* elliptic, furrowed, shortly beaked, top hairy.

** Spikelets ovate-lanceolate in dense heads, flattened.

10. **B. Balcooa,** *Roxb. Fl. Ind.* ii. 196; stem-sheaths dimorphic, leaves oblong-lanceolate base rounded, sheath hairy, heads of spikelets bracteate, spikelets $\frac{1}{3}$–$\frac{1}{2}$ in. or more, empty gls. 0–2 ovate acute many-nerved, flg. gls. 4–6 larger margins ciliate, palea as long as the gl. ovate acute keels long-ciliate, anthers glabrous connective produced, ovary broadly ovoid. *Munro in Trans. Linn. Soc.* xxvi. (1868) 100; *Brandis For. Fl. Brit. Burm.* 567; *Gamble Bamb. Brit. Ind.* 42, t. 39. B. capensis, *Rupr. Bamb.* 54, t. 13, f. 54; *Steud. Syn. Gram.* 330. B. Vasaria, *Ham. ex Wall. Cat.* n. 5025. Dendrocalamus Balcooa, *Voigt Hort. Suburb. Calcutt.* 718.

BENGAL, from the Gogra, eastwd. to BEHAR and ASSAM.

Stems 50–70 ft., 3–6 in. diam., cœspitose, branched from the base, lower branches stiff leafless; internodes 8–18 in. with a whitish ring below and a hairy one above the swollen nodes, walls thick. *Stem-sheaths* of two forms; lower short, broad, ciliate, top rounded; blade short triangular decurrent into short fringed auricles; upper 10–14 by 8–10 in., almost glabrous, ciliate, truncate, blade 6–8 by 3–4 in., closely hairy above, margins recurved, base rounded and decurrent as a narrow band; ligule broad toothed. *Leaves* 6–12 by 1–2 in., pellucidly tessellate with glands, tip twisted scabrid, margins scabrous-ciliate, nerves 7–11; sheath appressed, hairy, truncate above with a narrow callus, bristly or not; ligule broadly triangular, membranous. *Panicle* compound, rachis pubescent or scurfy, swollen above; palea obscurely nerved. *Lodicules* 3, ovate or obovate, fimbriate. *Anthers* glabrous, pointed. *Stigmas* 3, long.

Sect. II. Arborescent or shrubby. *Stems* not spinous. *Spikelets* flattened; flg. gls. few or many. *Lodicules* 2–3.

10*. B. VULGARIS, *Schrad. in Wendl. Collect.* ii. 26, t. 47; nodes with a hairy ring, leaves linear-lanceolate petioled glabrous tessellate by pellucid glands, sheath laxly hairy, callus smooth, auricle ciliate, ligule short, spikelets $\frac{6}{10}$–$\frac{8}{10}$ in. in bracteate clusters of 3–10 oblong acute bifid, empty gls. 1–2 ovate acute many-nerved tip ciliate, flg. gls. 6–10 larger, palea as long as the gl. keels white-ciliate, anthers obtuse hairy apiculate purple, ovary narrow hairy, style long. *Roth Nov. Sp.* 198 (*excl. Syn.*

R. & S.); *Ruprecht in Mem. Acad. Petersb. Ser.* VI. v. (1839) 140, *Bamb.* 47, t. 11, f. 47; *Steud. Syn. Gram.* 329; *Dalz. & Gibs. Bomb. Fl.* 299; *Munro in Trans. Linn. Soc.* xxvi. (1868) 106; *Beddome Fl. Sylv.*, *Forest. Man.* p. ccxxxii.; *Brandis For. Flor.* 568; *Kurz For. Fl. Brit. Burm.* ii. 551, *Ind. Forester*, i. 339; *Miq. Fl. Ind. Bat.* iii 417; *Griseb. Fl. Brit. W. Ind.* 528; *Rivière, Les Bambous*, 191, f. 18, 19; *Trim. Cat. Ceyl. Pl.* 110; *Gamble Bamb. Brit. Ind.* 44, t. 40. B. arundinacea, *Ait. Hort. Kew Ed.* II. 316; *Moon Cat. Ceyl. Pl.* 26 (*non Willd.*). B. humilis, *Reichb. fid. Rupr. l. c.* 50. B. Sieberi, *Griseb. l. c.* 5. B. striata, *Lodd. ex Munro l. c.* 121; *Bot. Mag.* t. 6079. B. surinamensis, *Rupr. l. c.* 49, t. 11, f. 49; *Steud. l. c.* 329. B. Thouarsii, *Kunth in Journ. de Phys.* (1822) 148; *Rev. Gram.* i. 323, t. 73, 74, *Enum. Pl.* i. 431, *Suppl.* 356; *Rupr. Bamb.* 48, t. 11, f. 48; *Steud. l. c.* 329; *Nees in Linnæa*, 466; *Thwaites Enum. Pl. Ceyl.* 375. Nastus Thouarsii, *Spreng. Syst.* ii. 113.

Cultivated throughout tropical INDIA and in all hot countries. (Wild in Java, *Kurz*).

Stems 20–50 ft., by 2–4 in. diam., rather distant, green yellow or striped, polished; nodes hardly raised, with usually a ring of brown hairs; internodes 10–18 in., walls rather thin. *Stem-sheaths* 6–10 in. by 7–9 in. broad, often streaked with yellow, thickly hairy above, top rounded retuse; blade 2–6 by 4 in., appressed hairy on both surfaces, base rounded decurrent with rounded falcate fimbriate auricles; ligule broad, toothed or fimbriate. *Leaves* 6–10 by $\frac{2}{3}$–1$\frac{2}{3}$ in., pale, petioled, tip twisted scabrid, nerves 6–8; sheath loosely hairy, callus ciliate, auricle rounded; ligule short, ciliate. *Panicle* large, leafy, clusters of spikelets largest at the nodes, rachis scurfy. *Lodicules* 3, winged, ciliate.

11. **B. Oliveriana**, *Gamble Bamb. Brit. Ind.* 130, t. 116; stems cœspitose, leaves small linear thin, auricles unequal, panicle of drooping unilateral spikes with distant bracteate clusters of 1–3 flattened spikelets about $\frac{1}{2}$ in. long, empty gls. 1–2 ovate-lanceolate, flg. gls. 3–4 9-nerved, rachilla long flattened, palea as long as the gl. acute tip penicillate keels glabrous, anthers obtuse, ovary elongate ovoid, style short, stigmas 2.

UPPER BURMA, *Oliver, Rogers.*

Stems graceful, 40–45 ft., 1–2 in. diam.; glossy green, branching from the base, internodes about 14 in. *Stem-sheaths* thin, pale, 8–10 in. by 4–5 broad, narrowed upwards to a mouth 2–3 in. broad, glabrous; blade 4–8 in., triangular-lanceolate, cordate, sparsely hairy on both surfaces; auricles unequal long fringed, one $\frac{1}{10}$–$\frac{1}{3}$ in. rounded, the other decurrent; ligule $\frac{1}{10}$ in. broad, serrate. *Leaves* 4–7 by $\frac{1}{3}$–$\frac{2}{3}$ in., petioled, glabrous, nerves 4–5 pair; sheath glabrous, callus emarginate; ligule rather long. *Bracts* of infl. truncate, glabrous. *Palea* 3-nerved between and on either side of the keels. *Lodicules* 3, rounded, fimbriate. *Grain* ovoid. *Anthers* striped red and yellow, then purple.

12. **B. Binghami**, *Gamble Bamb. Brit. Ind.* 45, t. 41; stems wiry, leaves linear or linear-lanceolate base rounded tip long twisted glabrous, panicle terminal short leafy, spikelets few in scattered fascicles about $\frac{1}{2}$ in. long, empty gls. 1–2 striate mucronate, flg. gls. 5–6 ovate acute mucronate smooth many-nerved, palea as long as the gl. or longer keels fringed with long hairs, anthers obtuse or with an apical hair, ovary elongate, style short.

LOWER BURMA; Tenasserim, *Bingham.*

Leaves 3–6 by $\frac{1}{3}$–$\frac{2}{3}$ in., subsessile or petiole very short, smooth on both surfaces, nerves 5–6 pairs. *Panicle* with short rachis; joints sometimes geniculate clavate. *Spikelets* with distichous gls., rachilla evident broad clavate flexuous; palea conspicuous. *Lodicules* rounded, long-ciliate. *Grain* linear-oblong, beak hairy.—Appears not to differ very greatly from the Chinese *B. flexuosa*, Munro.

13. **B. Kingiana,** *Gamble Bamb. Brit. Ind.* 46, t. 42; leaves linear-lanceolate tessellate by pellucid glands base unequally rounded, petiole flat, sheath smooth, ligule broad toothed or fimbriate, spikelets ½ in. few in regularly spaced clusters ovate flattened, empty gls. 2 ovate acute margins ciliate, fl. gls. 4–6 similar but larger, palea oblong keels long-ciliate, anthers penicillate, ovary stipitate broadly ovoid, style short stout.

UPPER BURMA; Katha district, *Oliver*.

Stems 60–70 ft., up to 4 in. diam. *Leaves* 10–12 by 1–2½ in., tip scabrid, at first sparsely hairy beneath, nerves 10–15 pairs; petiole ⅕–⅓ in.; sheath smooth, margins ciliate, callus broad shining, auricle small naked; ligule unequal-sided. *Panicle* large, compound, rachis of spiciform branchlets flexuous, joints flattened on one side, bracts small. *Spikelets* purplish, rachilla clavate flattened. *Lodicules* 3, long-fimbriate. *Stigmas* 3.—Habit of a *Dendrocalamus*. *Stem-sheaths* not known.

Sect. III. Shrubby, not spinous. *Spikelets* ovate, flattened, many-fld., long-mucronate. *Lodicules* 0.

14. **B. lineata,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 118; stems reed-like, leaves large stiff brittle ovate- to linear-lanceolate, ligule short stiffly fimbriate, infl. of spikes or panicles terminating leafy branchlets and bearing bracteate clusters of often spirally twisted spikelets about ½ in., bracts large, empty gls. 1–2 ovate long acuminate 5–7-nerved, flg. longer white-ciliate, palea narrow keels minutely ciliate, anther-tips penicillate, ovary oblong pubescent. *Gamble Bamb. Brit. Ind.* 46, t. 43. B. Rumphiana, *Kurz in Journ. As. Soc. Beng.* xxxix. (1870) 86, *Ind. Forester*, i. 341. B. Amahussana, B. atra, B. picta, B. prava, *Lindl. in Penny Cyclop.* iii. (1835) 357. Leleba Rumphiana, *Kurz in Cat. Hort. Bogor.* (1866) 20. L. lineata, *Rumph. Herb. Amb.* vi. 5, t. 1.

ANDAMAN ISLDS., *Prain*, in marshy coast forests.—DISTRIB. Malay Archipelago.

Stems short, always flowering, ½–1 in. diam., green or striped with yellow, young much branched, sparsely bristly; nodes ringed by the bases of the fallen sheaths; internodes 16–24 in., rough. *Stem-sheaths* about 6 by 3–4 in., truncate, young strigose with golden hairs; blade usually as long as the sheath, ovate, cuspidate, erect, many-nerved, base rounded then dilating into a hairy long ciliate band on the sheath. *Leaves* very variable, up to 15 by 3 in. on the shoots, shorter on the branches, dull green, pale beneath, tessellate by pellucid glands, tips and margins scabrid, nerves 8–12; sheath hairy, keeled, truncate, callus minute or 0; auricles long, falcate, bristly, deciduous; ligule stiffly fimbriate. *Spikelets* sessile; bracts truncate; rachilla short, glabrous. *Stigmas* 3.—A very remarkable species with *Bromus*-like spikelets. Kurz enumerates 5 varieties in the "Indian Forester." (*B. atra* is its earliest name.—J. D. H.)

Sect. IV. Arborescent, not spinous. *Spikelets* cylindric, few-fld. *Lodicules* 0–3.

15. **B. schizostachyoides,** *Kurz ex Gamble Bamb. Brit. Ind.* 48, t. 44; leaves lanceolate to linear-lanceolate, sheath at first hispid truncate, callus 0, auricle falcate bearing long twisted stiff bristles, ligule long, panicle terminal spiciform, spikelets about ½ in. few in bracteate clusters, empty gls. 1–2 ovate mucronate many-nerved, flg. gls. 2–3 longer rough above, palea narrow keels ciliate, anthers long-apiculate, ovary elliptic-oblong, style long. Cephalostachyum schizostachyoides, *Kurz For. Fl. Burm.* 565. Melocanna? Kurzii, *Munro in Trans. Linn. Soc.* xxvi. (1868) 134. Teinostachyum schizostachyoides, *Kurz in Journ. As. Soc. Beng.* xxxix. (1870) ii. 89.

SOUTH ANDAMAN ISLDS., *Kurz*.

Stems tufted, 20–30 ft. by 3–4 in. diam., green, glossy, nodes not thickened; internodes 1½–2 ft., walls thin; branches 1–4 from each node, leafy below, flowering above. *Leaves* 4–7 by ½–1¼ in., tip twisted scabrous, glabrous and pale beneath, nerves 5–6. *Bracts* of infl., narrow, truncate or acuminate, smooth, rachis pubescent, joints about 1 in. *Palea* membranous, acuminate, dorsally 3-nerved. *Lodicules* if present lanceolate, ciliate. *Anthers* purple, cells unequal. *Ovary* narrowed into the style. *Grain* obliquely oblong, smooth, beak long stiff.—Stem-sheaths not known. Remarkable for the narrow membranous acuminate palea.

Sect. V. Subscandent, not spinous. *Spikelets* cylindric, fl. gl. solitary.

16. **B. Griffithiana,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 99; leaves large lanceolate glaucous beneath base unequal cuneate tessellate by pellucid glands, sheath glabrous keeled callus narrow, auricles falcate reflexed strongly bristly, ligule elongate ciliate, spikelets about ½ in. in distant heads on a hollow soft rachis ovate-lanceolate acute, empty gls. 2 ovate acute many-nerved, flg. gl. larger mucronate, palea membranous acute keels glabrous, anthers obtuse tip 2-fid, ovary ovoid glabrous. *Gamble Bamb. Brit. Ind.* 49, t. 45. Dendrocalamus Griffithianus, *Kurz For. Fl. Brit. Burm.* ii. 562.—Bambusa, *Griff. Journ.* 90.

UPPER BURMA; banks of Mogaung River, *Griffith*.

Stems soft, slender, hollow. *Leaves* 1–1½ by 2–3 in., tip subulate, twisted, scabrid, nerves 13–17, petiole ⅕ in., stout; auricles of sheath up to ⅔ in., bristles long; ligule obtuse or triangular, often cleft. *Panicle* terminal, of spiciform branches bearing heads at intervals of 1–4 in. *Spikelets* cylindric; flg. gl. convolute; rachilla glabrous, clavate, much shorter than its imperfect terminal gl.; palea many-nerved. *Lodicules* 3, long-fimbriate, one much smaller. *Style* very short, stigmas long, plumose.

17. **B. Wrayi,** *Stapf in Kew Bulletin*, 1893, 14, in *Hook. Ic. Pl.* t. 2253; stems decurved, leaves linear-lanceolate narrowly acuminate, auricles of sheath small, ligule short truncate bristles long, panicle large leafy, spikelets in short bracteate spikes, within each bract is a keeled bracteole, then 2 imperfect spikelets in the axils of lanceolate glabrous gls. each subtended by a 2-keeled ciliate scale, fertile spikelet with ovate-lanceolate acute many-nerved, gls. keels of palea rough or faintly-ciliate, anthers obtuse glabrous, ovary ovoid glabrous. *Gamble Bamb. Brit. Ind.* 50, t. 46.

MALAY PENINSULA; Perak, alt. 4500–5500 ft., *Wray*.

Stems 40–60 ft., 1 in. diam., semiscandent, tips decurved to the ground, yellow, glabrous, shining, 3rd or 4th lower internodes up to 7 ft. *Leaves* 8–10 by 1 in., glabrous, petiole short narrow, nerves 7–8; sheath pale, glabrous, callus shining; hairs of ligule up to ½ in. *Panicle* large, leafy, clusters of spikelets at the nodes or in spiciform branches, rachis smooth. *Empty gl.* convolute, rachilla as long as its imperfect terminal gl. *Lodicules* narrow, minutely ciliate. *Ovary* narrowed into a very short style, stigmas long, plumose. *Grain* oblong, beak cylindric.

Sect. VI. Arborescent, spinous.

18. **B. Blumeana,** *Schult. f. Syst.* vii. 1343; stem-sheaths short, leaves fascicled linear-lanceolate sheath appressed hairy, ligule fimbriate, clusters of many imperfect and few perfect spikelets, perfect spikelets 1–1½ in. slender compressed, empty gls. 2–3 ovate acute 3–7-nerved, flg. gl. ovate acuminate 7–8-nerved, palea broad obtuse concave keels ciliate, anthers obtuse, ovary ovoid, style very short. *Kunth Enum.*

Pl. i. 431; *Munro in Trans. Linn. Soc.* xxvi. (1868) 101; *Kurz Ind. Forester*, i. 340; *Gamble Bamb. Brit. Ind.* 50, t. 47. B. spinosa, *Blume ex Nees in Bot. Zeit.* (1825) 580. Ischurochloa spinosa, *Büse in Miq. Pl. Jungh.* 389. Schizostachyum Durie, *Rupr. Bamb.* 46.

MALAY PENINSULA; Pahang, *Ridley*.—DISTRIB. Malay Islds.

Stems 30–60 ft. or more, 3–4 in. diam., hard, smooth, glossy, nodes not prominent, walls thick; branches many, yellowish, copiously armed; spines short ternate, recurved. *Stem-sheaths* 5–6 by 3–4 in. broad, narrowed to a broad convex mouth, thick, coriaceous, hispid with stiff tawny bristles, young striped violet-brown and yellow; blade nearly as broad as the sheath, triangular, cuspidate, convolute, sides covered with tawny bristles, decurrent as a broad band ending in a rounded auricle, both lined with long stiff bent bristles; ligule narrow, toothed, long-fimbriate. *Leaves* 3–6 by $\frac{1}{3}$–$\frac{1}{2}$ in., glabrous, base rounded, tip twisted scabrous, glaucous beneath, nerves 5–7; sheath appressed hairy, callus recurved ciliate, mouth sparsely bristly; ligule truncate, fimbriate. *Panicle* large, terminal, branches spiciform. *Lodicules* 3, long-ciliate. *Grain* obovoid, shining above, tipped with the three stigmas.

19. **B. arundinacea,** *Willd. Sp. Pl.* 245; stem-sheaths long blade with felted hairs within, leaves linear or linear-lanceolate glabrous or slightly pubescent beneath, ligule short, spikelets $\frac{1}{2}$–1 in. sessile lanceolate acute, empty gls. 0–2 ovate-lanceolate acute or mucronate many-nerved, fl. gls. 3–7 like the empty lower bisexual upper male with 2 or 3 uppermost imperfect, keels of palea ciliate, anthers yellow obtuse, ovary elliptic-oblong style short. *Retz. Obs.* v. 24 (Bambos); *Roxb. Cor. Pl.* i. 56, t. 79, *Fl. Ind.* ii. 191; *Poir. Encycl.* viii. 701; *Kunth Enum. Pl.* i. 431; *Rupr. Bamb.* 51, t. 13, f. 50; *Grah. Cat. Bomb. Pl.* 239; *Dalz. & Gibs. Bomb Fl.* 299; *Munro in Trans. Linn. Soc.* xxvi. (1868) 103; *Brand. For. Fl.* 564; *Beddome Fl. Sylv.* t. ccxxi., *Forest. Man.* p. ccxxxi.; *Kurz For. Fl. Brit. Burm.* ii. 554; *Thw. Enum. Pl. Zeyl.* 375; *Trim. Cat. Ceyl. Pl.* 110; *Wall. Cat.* n. 5023 A; *Duthie Fodd. Grass. N. Ind.* 70; *Gamble Bamb. Brit. Ind.* 51, t. 48. B. Arundo, *Klein ex Nees in Linnæa*, ix. (1834) 471; *Rupr. Bamb.* 53, t. 13, f. 53; *Wight ex Steud. Nom. Ed.* II. i. 183. B. Neesiana, *Arn. ex Munro l. c.* B. orientalis, *Nees l. c.* 475; *Rupr. l. c.* 52, t. 13, f. 51; *Munro l. c.* 105; *Beddome l. c.* p. ccxxxi. B. pungens, *Blanco Fl. Filip. Ed.* I. 270. B. spinosa, *Roxb. Fl. Ind.* ii. 198; *Ham. in Trans. Linn. Soc.* xiii. (1822) 480; *Wall. Cat.* n. 5024; *Nees l. c.*; *Rupr. l. c.* 52, t. 12, f. 52, t. 13, f. 52; *Munro l. c.* 104; *Beddome l. c.*; *Brandis l. c.* 566; *Steud. Syn. Gram.* 329; *Benth. Fl. Hongk.* 434. Arundo Bambos, *Linn. Sp. Pl.* 81. 'Ily,' *Rheede Hort. Malab.* i. t. 16.

Throughout the Plains and low hills of INDIA and CEYLON, wild and cultivated. (Cultivated only in the lower Himalaya and in the valleys of the Ganges and Indus.)

Stems from a stout rootstock, 80–100 ft. and 6–7 in. diam., graceful and curving (or short and thickly branched), branched from the base; nodes prominent, lower with long horizontal shoots armed with 2–3 recurved spines; internodes up to 18 in., often subangular, the smaller flattened on one side, walls 1–2 in. thick. *Stem-sheaths* 12–15 by 9–12 in., coriaceous, young orange-yellow often striped green or red, top rounded, edges plaited, young thickly clothed with golden hairs; blade triangular, up to 4 in., acuminate, concave, glabrous without, matted within with dark bristles; margins involute, decurrent on the sheath, wavy, long and thickly ciliate, hardly auricled; ligule narrow, entire, or fringed with white hairs. *Leaves* up to 8 by 1 in., tip sharp stiff, base rounded ciliate, subtessellate by pellucid glands; sheath glabrous or nearly so, callus thick ciliate, auricle short. *Panicle* enormous, often occupying the whole stem; rachis usually stiff, shining, sometimes soft and angular. *Lodicules* 3, small, fimbriate. *Anthers* sometimes apiculate.—Flowers gregariously and in small clumps. The following species of most authors are here united. The two first scarcely differ, the last seems more nearly a separate species and the remarkable rachis justifies its admission as a variety.—Further *B. arundinacea* shows two distinct varieties of habit, a tall handsome large stemmed one of the valleys of the Circars and hills of S. India (often cult. elsewhere); and an almost dwarf gregarious thick branched very thorny small-stemmed one 20 ft. high (probably Roxburgh's *B. spinosa*) which grows gregariously in the low hills and laterite downs of Orissa, Ganjam, Lower Bengal and Burma.

B. ARUNDINACEA; rachis of infl. very glabrous shining hard, spikelets few long 6–12-fld., rachilla evident hirsute, leaves smooth, sheath hairy.

B. SPINOSA, rachis striate hard not shining, spikelets many shorter 4–6-fld., rachilla obscure, leaves glabrous above hairy beneath, sheath hairy, then subglabrous.

B. ORIENTALIS; rachis glaucous green angled almost soft, spikelets membranous 5–8-fld., leaf-sheath hairy with white cilia, petiole hairy.

B. Species of which the flowers are unknown.

20. **B. auriculata,** *Kurz in Journ. As. Soc. Beng.* xxxix. (1870) 86; cœspitose, stem-sheaths strigose on the back, leaves lanceolate tessellate by pellucid glands, sheath smooth polished, auricle naked shining. *Gamble Bamb. Brit. Ind.* 55, t. 49. Gigantochloa auriculata, *Kurz For. Fl. Brit. Burm.* ii. 557.

ASSAM, SYLHET, CHITTAGONG & BURMA, *Mann*, *Kurz*, &c.

Evergreen. *Stems* 40–50 ft., 2–2½ in. diam., glossy, old yellow, young scurfy, branches decurved, nodes hardly thickened; internodes 18–30 in., lower shorter, walls thick. *Stem-sheaths* 10–12 in. by 9–10 in., base broad, convexly truncate where 4 in. broad; blade 6–9 in., triangular, acute, base slightly rounded decurrent and forming a rounded auricle; blade and sheath densely strigose except along the middle; ligule sharply toothed. *Leaves* 8–16 by 1–2½ in., petiole $\frac{1}{10}$–$\frac{1}{3}$ in., point twisted scabrid, nerves 8–12, shining; callus of sheath smooth; auricle thick, rounded, glossy.—Referred by Munro to *B. vulgaris*, but very distinct, and easily recognizable by the two hairy patches on the stem-sheath, and the thin blade.

21. **B. villosula,** *Kurz For. Fl. Brit. Burm.* ii. 553; stems solitary, stem-sheaths glabrous truncate ciliate blade 0, leaves linear glaucescent beneath tessellate by pellucid glands, callus of sheath shining, auricle solitary long-fringed. *Gamble Bamb. Brit. Ind.* 56.

MARTABAN & UPPER TENASSERIM, on limestone hills, *Brandis.*

Stems about 3 in. diam., nodes hardly raised, internodes 12–15 in. *Leaves* 5–8 by ½–¾ in., tip cuspidate setaceous twisted scabrid, nerves 6–12 inconspicuous; sheath minutely villous, then glabrescent, margins whitish-ciliate; ligule short.

22. **B. Mastersii,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 113; stem scandent reed-like, leaves oblong-lanceolate narrowed into a glandular (wrinkled ?) often hairy petiole tessellate by oblique pellucid glands, tip beaked acuminate hairy, callus of sheath narrow, auricles with long stiff folded bristles. *Gamble Bamb. Brit. Ind.* 56.

ASSAM; at Dibrugarh, *Masters.*

Leaves 10–13 by about 1½ in., base yellowish, glaucescent beneath, costa yellowish shining, nerves 10–12 pairs; sheath striate, margins ciliate, sides appressed-bristly; ligule very short.

23. **B. marginata,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 114; stems tall scandent dark-colrd. fistular, branches deflexed, branchlets bracteate geniculate, lower internodes hirsute, leaves oblong-lanceolate margins towards the setaceously acuminate tip shaggy with thick silky

hairs, callus ciliate, ligule truncate toothed hairy outside. *Gamble Bamb. Brit. Ind.* 57.

TENASSERIM; top of Daunat range, alt. 5000 ft., *Brandis.*
Leaves 6–7 by 1–1¼ in., glabrous, base rounded, petiole $\frac{1}{10}$–⅓ in., costa yellowish, nerves 4–7 pairs, pellucid glands few; sheath striate, keeled, glabrous.—Perhaps a *Dinochloa.*

UNDETERMINABLE SPECIES.

B. ARISTATA, *Lodd. ex Lindl. in Penny Cyclop.* iii. 357.

135. THYRSOSTACHYS, *Gamble.*

Arborescent erect bamboos. *Stem-sheaths* elongate, thin, persistent; blade long, narrow. *Leaves* small or moderate sized. *Panicle* compound. *Spikelets* prominently bracteate, loose, pale, 2–3-fld., upper gl. fertile, terminal rudimentary on a produced rachilla; empty gls. 1–2, striate; flg. similar; palea of lower gl. 2-cleft, lobes caudiform, keels ciliate, of upper entire, elongate, not keeled; rachilla hairy. *Lodicules* 0–3, long-acuminate. *Stamens* 6, anthers mucronate. *Ovary* depressed-turbinate, style long, stigmas 2–3 feathery. *Grain* cylindric, long-beaked, glabrous, top shining, side grooved; pericarp crustaceous, adherent to the seed.

1. **T. Oliveri**, *Gamble Bamb. Brit. Ind.* 58, t. 50; stem-sheaths transversely truncate not auricled blade, long subulate, leaves long linear-lanceolate, panicle thyrsoid curved, spikelets ½–1 in., empty gls. 2 ovate acute sparsely hairy many-nerved, nerves trabeculate, flg. gls. similar, palea 3–5-nerved hairy between the keels.

UPPER BURMA, alt. 2000 ft., in moist forests, *Oliver;* Shan Hills, *Abdul Huk.*
Cœspitose. *Stems* straight from a stout rootstock, 50–80 ft. by 1–2½ in. diam., bright green, young silkily-downy old dull green or yellowish, nodes thickened; internodes 16–24 in., walls rather thin. *Stem-sheaths* persistent, shorter than the internodes, green to orange and brown, dorsally thickly pubescent, margins ciliate, not auricled; blade 8–9 by ¾ in., recurved, hairy above; ligule serrate. *Leaves* 7–8 by ½–⅔ in., roughish, base rounded, hairy beneath, nerves 6 pairs, pellucid glands irregular; sheath hairy, keeled; callus glabrous or hairy. *Thyrsus* bracteate at the nodes; rachis flexuous, hairy, top swollen; bracts ½–⅔ in., narrow, obtuse, sometimes foliiferous. *Spikelets* long and short, rachilla hairy. *Lodicules* 2, lanceolate, ciliate. *Filaments* purple, anthers yellow, connective obtuse. *Ovary* depressed turbinate, pedicelled, yellow, stigmas 3.

2. **T. siamensis**, *Gamble Bamb. Brit. Ind.* 59, t. 51; deciduous, stem-sheaths waved and truncate at top, auricles short triangular, blade narrowly triangular, leaves small narrow linear, panicle large, spikelets pedicelled fertile and sterile mixed, empty gl. solitary ovate acute 8-nerved base white-pubescent, flg. gls. 3 larger uppermost alone fruiting base and tip pubescent 14–16-nerved. Bambusa regia, *Thoms. ex Munro in Trans. Linn. Soc.* xxvi. (1868) 116 (*non Kurz*). B. siamensis, *Kurz mss.*

BURMA, from Mandalay to Tenasserim, *Brandis, Oliver.*—DISTRIB. Siam.
Stems cœspitose, very graceful, 25–30 ft., 1½–3 in. diam., branching towards the top only, branches after flowering often producing small-leaved tufts of wiry branchlets; nodes not prominent; internodes 8–11 in., with a white ring below the nodes. *Stem-sheaths* very persistent, 9–11 by 4½–8 in., thin, soft, white-pubescent; blade

4–5 in., margins recurved; ligule narrow, glabrous, ciliate. *Leaves* 3–6 by $\frac{1}{3}$–$\frac{1}{2}$ in., glabrous or young puberulous, tips short twisted, costa narrow, nerves 3–5 pairs; sheath white pubescent and ciliate, truncate, callus glabrous; ligule short, ciliate. *Panicle* graceful, pale; branchlets many, thin, bearing bracteate clusters of few fertile spikelets mixed with sterile; bracts cymbiform, glabrous, tip truncate; rachis fine, wiry, curved, smooth, clavate. *Spikelets* whitish. *Palea* of upper fl. gl. longer than the gl., not keeled, concave, striate, glabrous, 2-mucronate, narrowed into a beak. *Lodicules* 0. *Ovary* at first ovoid, then depressed, flattened; style glabrous.

136. **GIGANTOCHLOA**, *Kurz.*

Arborescent or scandent. *Stems* unbranched below. *Stem-sheaths* usually stiff, hairy above, auricled. *Leaves* long. *Panicle* compound, branches long spiciform, bearing heads of few usually fertile and sterile spikelets. *Empty gls.* 2–3; fl. gls. similar. *Palea* of all the fl. 2-keeled, keels ciliate. *Lodicules* 1–3 or 0. *Stamens* 6, filaments connate into a short thick at length elongate membranous tube. *Ovary* hairy, stigmas 1–3 hairy. *Grain* usually oblong or linear and furrowed, pericarp membranous. Species about 11, chiefly Malayan.

* Spikelets oblong or ovoid, rounded, or flattened in *G. Scortechinii.*

1. **G. verticillata,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 124; spikelets 2–4-fld. $\frac{3}{10}$–$\frac{4}{10}$ in. ovate subacute glabrous, empty gls. 2–3 broadly ovate ciliolate, flg. gls. 3–4 similar many-nerved mucronate. *Gamble Bamb. Brit. Ind.* 61, t. 52. G. maxima, *Kurz in Tidschr. Ned. Ind.* xxvii. (1864) 226, *Ind. Forester*, i. 343. Bambusa verticillata, *Willd. Sp. Pl.* ii. 245. B. pseudarundinacea, *Steud. Syn. Gram.* 330.

MALAY PENINSULA, wild and cultivated.—DISTRIB. Malay Archipelago.

Stems tufted, 80–100 ft., 4–5 in. diam., young striped yellow, mealy and with appressed brown deciduous bristles; old gray-green; nodes hairy, not prominent; internodes 18 in., walls rather thin. *Stem-sheaths* 12 in. long, as broad or broader, rounded to the mouth with rounded ciliate auricles, clothed without with golden brown hairs, glabrous and shining within; blade short, recurved, ovate, acuminate, narrowly decurrent; ligule narrow. *Leaves* 10–15 by $1\frac{1}{2}$–$2\frac{1}{2}$, base narrowed, top setaceous twisted scabrid, young hairy beneath, nerves 8–12; sheath truncate, young hairy, callus narrow, auricle short glabrous; ligule minute. *Rachis* and branchlets glabrous, smooth, slender. *Palea* of flg. gl. shorter than the gl. sometimes 2-mucronate, 3–5-nerved, ciliate on and between the keels. *Lodicules* variable. *Anthers* yellow. *Ovary* suborbicular, very hairy; style pubescent, stigmas 2–3.

2. **G. Scortechinii,** *Gamble Bamb. Brit. Ind.* 62, t. 53; spikelets trimorphous larger fertile, medium rigid, small sterile, fertile spikelet $\frac{7}{10}$–$\frac{9}{10}$ in. ovate acute flattened densely clothed with silvery grey hairs, empty gls. 2–3 ovate mucronate, fl. gls. longer.

MALAY PENINSULA, *Scortechini*, &c., alt. 400–600 ft.

Gregarious, forming forests. *Stems* 40–80 ft., 4–6 in. diam. *Leaves* linear-lanceolate, 12–16 by 1–$1\frac{1}{2}$ in., often unequal sided, base narrowed, tip acuminate twisted scabrid, softly hairy beneath, tessellate by pellucid glands; sheath densely pubescent, callus pubescent; auricle small, rounded, fringed with bristles; ligule short, hairy. *Panicle* compound, of curved spiciform branchlets bearing whorls of distichous heads 1–2 in. apart. *Spikelets* 2–5 fertile in each head mixed with sterile, rachis pubescent; uppermost flg. gl. convolute; palea shorter than the gl., 6-nerved between the 2 ciliate keels, top 2-fid. *Lodicules* 0. *Anthers* yellow, long-apiculate. *Ovary* rounded, style glabrous. *Grain* obtuse, glabrous.

** Spikelets narrow, cylindric, acute.

† *Leaf-ligule short.*

3. **G. macrostachya,** *Kurz For. Fl. Burm.* ii. 557; nodes hairy, leaves lanceolate whitish and softly puberulous beneath, spikelets 1–2 in. linear-subulate, gls. fringed with black hairs, empty gls. 2–3 ovate mucronate dorsally many-nerved with a few bristles, flg. gls. 2–3 longer linear-lanceolate convolute, palea very narrow keels white-ciliate dorsally 3–5-nerved. *Gamble Bamb. Brit. Ind.* 63, t. 54.

ASSAM; Garrow Hills, *Mann.* CHITTAGONG, ARRACAN, & BURMA, *Kurz*, &c.

Evergreen. *Stems* 30–50 ft., 2½–4 in. diam., fistular, young glaucous, old dark green, sometimes striped; nodes scarcely thickened; internodes 16–30 in., lower shorter, walls $\frac{2}{10}$–$\frac{3}{10}$ in. thick. *Stem-sheaths* 5–8 in. long, up to 14 broad, top truncate, densely covered with blackish hairs; blade as long or shorter, reniform, acute, appressed hairy beneath, base rounded dilated into a long-fringed band ½–1 in. broad with rounded auricles; ligule narrow. *Leaves* thin, lanceolate, 6–15 by ⅓–2 in., tip setaceous scabrid, margins scabrous, midrib narrow, nerves 5–13; sheath hairy, at length glabrous; callus rounded, auricles 1 or 2 ciliate; ligule short. *Panicle* large, leafy, branchlets spicate; spikelets 1–2 in., clustered, fertile and sterile. *Lodicules* 0. *Anthers* purple, tips setaceous. *Ovary* ellipsoid, style long curved hairy, stigma undivided. *Grain* linear, puberulous above.—The leaves resemble *Bamb. Tulda;* the sheaths *B. nutans* and *teres;* the spikelets *Oxytenanthera nigro-ciliata.*

4. **G. Wrayi,** *Gamble Bamb. Brit. Ind.* 64, t. 55; branchlets scurfy glaucous, leaves large oblong-lanceolate cuspidate shortly petioled strigose beneath, spikelets ¾ in. conical acute, gls. fringed with black hairs, empty gls. 2–3 ovate mucronate striate, flg. gls. 3–4 longer narrower, palea narrowly oblanceolate keels faintly ciliate 5–7-nerved.

MALAYA; Perak, at Bukit Gantang, *L. Wray.*

Stems 3 in. diam. *Leaves* 12–15 by 2–2½ in., tip setaceous, scabrous, midrib broad yellow, nerves 10–12 pairs, nervules of pellucid glands; sheath smooth, keeled, mouth and short auricle fringed with long stiff white bristles, callus narrow; ligule short, puberulous. *Panicle* compound, branchlets spiciform, fertile spikelets few, sterile shortly bracteate, rachis curved. *Spikelets* subcompressed; empty gls. 2–3, flg. gls. narrower. *Lodicules* 0. *Anthers* long, narrow, tips elongate setaceous hairy. *Ovary* hairy, style slender pubescent, stigma broadly plumose.

5. **G. Kurzii,** *Gamble Bamb. Brit. Ind.* 65, t. 56; leaves linear-lanceolate base cuneate petioled sparsely hairy beneath, spikelets ½ in. acute, gls. fringed with brown hairs, empty gls. 2–3 ovate mucronate many-nerved, flg. gls. 2–3 longer narrower terminal imperfect, palea linear obtuse 3–5-nerved keels ciliate.

TENASSERIM, *Kurz.* PERAK, *Ridley.*

Stem-sheaths 6 by 3 in., cylindric, truncate, glabrous; blade longer, recurved, lanceolate, decurrent in a narrow black band lining the top of the sheath, ending in a naked round auricle. *Leaves* 8–13 by ½–1½ in., petiole $\frac{1}{6}$ in., midrib narrow, nerves 9–11 pairs; young sheath appressed hairy, truncate, auricles rounded; ligule short. *Panicle* leafy, branchlets spicate. *Spikelets* 2–3 in. in heads with narrow bracts. *Anthers* obtuse, apiculate. *Ovary* stipitate, puberulous, style long, stigma plumose. *Grain* (young) glabrous.

†† *Leaf-ligule long.*

6. **G. heterostachya,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 125; subscandent, leaves linear-lanceolate base rounded shortly petioled tip setaceous twisted scabrous sparsely hairy on the midrib beneath, spikelets dimorphic sterile $\frac{1}{2}$–$\frac{3}{4}$ in., flg. 1–$1\frac{1}{4}$ in. oblong compressed, empty gls. 1–3 ovate glabrous, flg. gls. 4–5 with 1–2 imperfect convolute, palea short obtuse 4–8-nerved keels ciliate. *Kurz Ind. Forester*, i. 345; *Gamble Bamb. Brit. Ind.* 66, t. 57. Bambusa hetirostachya, *Munro in Herb. Trin. Coll. Dublin, fide Munro* l. c. 126.

MALAY PENINSULA; near Ayer Punas, about houses, *Griffith.*

Stems 30 ft., graceful, thin-walled. *Leaves* 4–11 by $\frac{1}{2}$–1 in., midrib narrow shining, nerves 6–8; sheath striate, auricle and callus rounded glabrous; ligule long, toothed, sometimes long-ciliate. *Panicle* large, leafy, branches spiciform, heads of spikelets $\frac{1}{2}$–4 in. apart, in the axils of chaffy glabrous bracts, rachis smooth, upper joints puberulous; flg. spikelets sometimes solitary, empty gls. with sometimes an imperfect fl. *Lodicules* 2 (or 3?) ovate or oblong, long-fimbriate. *Anthers* nearly $\frac{1}{2}$ in., tip apiculate penicillate. *Ovary* ellipsoid, very hairy; style often curved, hairy; stigmas 2–3, plumose.

7. **G. ligulata,** *Gamble Bamb. Brit. Ind.* 67, t. 58; leaves large oblong-lanceolate base wrinkled unequal narrowed into a flat petiole, tip acuminate with reflexed margins scabrous, ligule long 2-fid, spikelets $\frac{1}{2}$–$\frac{3}{4}$ in., conical acuminate, gls. ciliate with brown hairs, empty gls. 2–4 ovate acute mucronate many-nerved, flg. gls. longer, palea short 5-nerved keels long-ciliate.

MALAY PENINSULA; Perak, *Wray*; Pahang, *Ridley.*

Leaves 12–16 by 2–3 in., beneath pale and smooth except the scabrid tip, midrib broad yellow beneath, nerves 12–14 pairs, cross-nervules of pellucid glands; sheaths smooth, shining, brown, striate; callus rounded, shining, often ciliate; ligule up to 1 in., glabrous, lobes long-acuminate, membranous. *Panicle* terminal, long, of spiciform branchlets bearing distant heads on leafy branches, each with 5–8 fertile spikelets in the axils of long yellow glabrous bracts $\frac{1}{2}$–$1\frac{1}{2}$ in. long, mouth of bracts truncate, furnished with round dark naked auricles and long fimbriate ligules, rachis fistular, glaucous, lower joints 3 in. *Lodicules* 0. *Anthers* long-apiculate, tip hairy. *Ovary* long-stipitate, depressed ovoid, shining, hairy, style slender, stigma short plumose.

8. **G. latispiculata,** *Gamble Bamb. Brit. Ind.* 67, t. 59; leaves broadly lanceolate petioled base cuneate glabrous except the scabrid tips, ligule broad cleft, spikelets over 1 in., nearly glabrous, empty gls. 2–3, lower foliiferous ovate-lanceolate mucronate, fl. gls. 7–9 ovate-lanceolate long-acuminate hairy within margins faintly ciliate, palea shorter obtuse 7-nerved keels ciliate.

MALACCA, *Alwis.*

Stems 50 ft. *Leaves* 12–14 by 1–$1\frac{1}{4}$ in., pale, midrib prominent shining, nerves 8–9 pairs obscure; sheath smooth, glabrous, keeled, callus narrow. *Panicle* terminal, of spiciform branchlets bearing distinct heads 1–3 in. apart, of 1–4 very large flattened spikelets $\frac{1}{4}$–$\frac{1}{3}$ in. broad, rachis smooth striate; bracts very small. *Lodicules* small, obovate, 3–5-nerved, fimbriate. *Anthers* narrow, tips apiculate, penicillate. *Ovary* narrowly ovoid, pubescent, style slender, stigmas 3 plumose.

137. **OXYTENANTHERA,** *Munro.*

Arborescent or scandent unarmed Bamboos, with a stout usually creeping and stoloniferous rootstock. *Stem-sheaths* various. *Leaves* large or small, shortly petioled. *Panicle* large, branches with few or many heads of whorled or capitate spikelets. *Spikelets* elongate, cylindric or conical, 1–3-fld., terminal fl. usually fertile; empty gls. 1–3; fl. gls. elongate, mucronate. *Palea* of lower fls. 2-keeled, of uppermost convolute keel 0 or obscure. *Lodicules* 0. *Stamens* as in *Gigantochloa*. *Ovary* ovoid, style slender, stigmas 1–3 more or less plumose. *Grain* elongate, beaked, smooth.—Species the following and a tropical African.

* *Heads usually of few spikelets.* (Burmese and Malay species.)

1. **O. nigrociliata**, *Munro in Trans. Linn. Soc.* xxvi. (1868) 228; auricles of stem-sheaths naked, spikelets 1 in., gls. fringed with black or purple cilia many-nerved, empty gls. 2–3 ovate acute and mucronate, flg. gls. 2–3 and a terminal imperfect lanceolate acuminate long mucronate, palea narrow 2–3-nerved between the ciliate keels, anther tips elongate slender hirsute. *Beddome Fl. Sylvat., Forest. Man.* p. ccxxiii.; *Gamble Bamb. Brit. Ind* 69, t. 60. Bambusa nigrociliata, *Büse in Pl. Jungh.* i. 389; *Miquel Fl. Ind. Bat.* iii. 416. B. Bitung, *Hassk. Pl. Jav. Rar.* 42. B. gracilis, *Wall. Cat.* n. 5033. Gigantochloa nigro-ciliata, *Kurz Ind. Forest.* i. 345. G. andamanica, *Kurz For. Fl. Burma*, ii. 566.

ORISSA, CHITTAGONG, BURMA, the MALAY PENINSULA, and the ANDAMAN ISLDS. ? GARROW HILLS.—DISTRIB. Sumatra, Java.

Stem 30–40 ft. by $\frac{1}{2}$–2 in. diam., sometimes striped with yellow, internodes scabrous. *Stem-sheaths* about 6 in., margins ciliate, narrowed to the truncate tip, dorsally strigose; blade ovate-lanceolate, decurrent; auricle bright green, rounded, naked, hairy within; ligule narrow. *Leaves* 6–12 by 1–2 in., lanceolate, tip subulate twisted, base unequal and rounded or narrowed, scaberulous above, pale and at first pubescent beneath, midrib prominent, nerves 9–12, glands like nervules; sheath stiff, hairy at first only, margins ciliate, auricles rounded naked; ligule narrow. *Panicle* large, compressed; rachis of branches pubescent. *Spikelets* in distant whorls of 3–6. *Anthers* $\frac{1}{4}$–$\frac{1}{3}$ in., narrow, purple. *Ovary* pubescent. *Grain* linear-oblong, dorsally grooved, beak penicillate.

2. **O. albo-ciliata**, *Munro in Trans. Linn. Soc.* xxvi. (1868) 129; spikelets $\frac{6}{10}$–$\frac{8}{10}$ in., often curved mixed with yellow chaffy white-ciliate bracts fertile and a few sterile together, gls. white-ciliate, empty gls. 1–2 ovate acute, flg. gls. elliptic acute or faintly notched many-nerved convolute 2–3 lowest male, upper 1 or 2 bisexual, anthers with long hirsute tips. *Gamble Bamb. Brit. Ind.* 70, t. 61. Gigantochloa albo-ciliata, *Kurz For. Fl. Burma*, ii. 555.

Throughout BURMA, *Falconer*, &c.

Stems 20–30 ft. by $\frac{1}{2}$–1 in. diam., densely tufted, greyish-green, curved, nodes raised; internodes 6–15 in., hispid above, walls $\frac{1}{5}$–$\frac{1}{3}$ in. thick. *Stem-sheaths* 4–8 by 6 in., tawnily strigose, then glabrous, base coriaceous folded, mouth narrow ending in a slightly auricled naked band; blade lanceolate, base rounded and decurrent; ligule $\frac{1}{2}$–1 in., toothed. *Leaves* 6–8 by $\frac{3}{4}$–1 in., linear-lanceolate, tip setaceous, base rounded, shortly petioled, glabrous on both surfaces, nerves 6–8, pellucid glands like nervules; sheath smooth, striate, truncate, callus smooth; ligule rather long. *Panicle* large, spreading; branches smooth, slender, with distant whorls of 10–20 spikelets. *Ovary* acuminate, pubescent. *Grain* oblong, acuminate.

3. **O. sinuata**, *Gamble Bamb. Brit. Ind.* 71, t. 62; leaves large softly pubescent beneath, panicle-branches softly tomentose, spikelets sterile and fertile mixed, $\frac{3}{10}$–$\frac{4}{10}$ in. in small heads conical puberulous, gls. ciliate many-nerved, empty gls. 2–3 ovate mucronate, fl. gls. 2–3 longer fertile uppermost convolute, lower paleæ 2–3-nerved between the ciliate keels, tip of narrow anthers slender hairy.

MALAYA; Sunjei Ulong. JOHORE, *Ridley* (var. with glabrous spikelets).

Leaves 10–12 by $1\frac{1}{4}$–$1\frac{1}{2}$ in., oblong-lanceolate, acuminate, base rounded or subcordate, petiole broad hairy, tip setaceous scabrid twisted scaberulous above, midrib faint, nerves 10–12 pair; sheath glabrous or puberulous, keeled, striate, ending in a narrow ciliate callus; ligule rather short, thickly pubescent. *Panicle* with slender sinuous branches, internodes $\frac{1}{2}$–$1\frac{1}{2}$ in. *Ovary* broadly ovoid, style hairy, stigma plumose.

4. **O. parvifolia,** *Brandis ex Gamble Bamb. Brit. Ind.* 72, t. 63; leaves 3–5 by $\frac{1}{2}$ in. linear-lanceolate puberulous beneath, spikelets narrow $\frac{2}{3}$–$\frac{3}{4}$ in. 4–10 in a whorl with polished bracts, rachis slender wiry, gls. eciliate fertile and sterile mixed, empty gls. 2–3 ovate mucronate glabrous, fl. gls. similar but longer usually 2 fertile and 1 imperfect, palea 2–3-nerved between the shortly ciliate keels, anthers short obtuse.

BURMA; in the Yônzalin Valley, *Brandis.*

Stems up to 3 in. diam. *Stem-sheaths* 8–9 by 8–10 in., strigose with brown hairs, top truncate striate; blade 2–3 by 1 in, base rounded and decurrent in a narrow naked subauricled band; ligule long, rather broad. *Leaves* shortly petioled, base rounded, tip subulate twisted, pale and puberulous beneath; sheath at first hairy, ending in a prominent callus bristly at the top. *Panicle* of long glabrous branches, with internodes 1–2 in. *Spikelets* glabrous; empty gls. striate towards the tip. *Ovary* hairy, style long slender, stigmas 1–2 plumose.

** *Heads of many spikelets.*—South Indian species.

5. **O. Thwaitesii,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 129; stem reed-like straggling, leaves up to 8–12 by 1–$1\frac{1}{2}$ in., spikelets $\frac{1}{4}$–$\frac{1}{2}$ in. in dense heads with ovate bracts acute pale usually 1-fld., rachis smooth, gls. with more or less ciliate margins, empty gls. 2–3 ovate mucronate many-nerved, flg. gl. ovate acute cuspidate pubescent above, palea convolute, anther-tips long hairy, stigmas 3. *Beddome Fl. Sylv.* t. cccxxii.; *Forest. Man.* p. ccxxxii.; *Trim. Cat. Ceyl. Pl.* 110; *Gamble Bamb. Brit. Ind.* 73, t. 64. Dendrocalamus monadelphus, *Thwaites Enum. Pl. Ceyl.* 376.

NILGHIRI and TRAVANCORE HILLS, alt. 3500–6000 ft. CEYLON, alt. 4–6000 ft.

Stems 10–12 ft. by 1 in. diam., gregarious, straggling or subscandent, smooth; branches whip-like, branchlets whorled and sheathed, nodes prominent, internodes 12–18 in. rough, young hirsute, walls $\frac{1}{10}$–$\frac{2}{10}$ in. thick. *Stem-sheaths* about 6 by 3–4 in., of young shoots glabrous yellow shining, of old strigose with light brown hairs, ending in a coriaceous separable ciliate ring; blade 3–5 by 1 in, base rounded decurrent in rounded falcate auricles, pectinately ciliate with long curved bristles; ligule of old sheaths long-fimbriate, of young narrow erose. *Leaves* with twisted setaceous tips, sparsely hairy beneath, midrib narrow yellow, nerves 4–5 pairs, pellucid glands few; sheath often hirsute keeled, callus rounded, young with falcate bristly auricles; ligule long. *Panicle* very large, leafy; lower heads $1\frac{1}{2}$–2 in. diam., upper smaller with fewer spikelets. *Ovary* ovoid and style pubescent. *Grain* $\frac{1}{5}$–$\frac{1}{3}$ in., glabrous, mucronate.—Easily recognized by the whip-like climbing branches and long-ciliate sheaths.

6. **O. monostigma,** *Beddome Fl. Sylv. Forest. Man.* p. ccxxxiii., and *Ic. Pl. Ind. Or.* i. 56, t. 234; stem solid velvety-tomentose pale yellow, leaves 6–8 by $1\frac{1}{2}$ in. linear-lanceolate, spikelets $\frac{3}{4}$–1 in. in globose heads fertile and sterile spinescent, glabrous, empty gls. mucronate 2–3 lower small ovate, upper ovate-lanceolate, flg. long linear-lanceolate long-mucronate convolute, palea concave not keeled obtuse, anthers tipped with a long hairy bristle, stigma 1. *Gamble Bamb. Brit. Ind.* 74, t. 65. Bambusa Ritcheyi,

Munro in Trans. Linn. Soc. xxvi. (1868) 113. Schizostachyum hindostanicum, *Kurz in Journ. Beng. As. Soc.* xlii. (1873) II. 252.

WESTERN GHATS, from the Concan to the Anamalai Hills.

Stems 10–15 ft. or more by 1 in. diam., internodes long. *Stem-sheaths* 6–9 by 3 in. broad at the base, narrowed from the base up to the 2-lobed tip; blade in the sinus, 3 in., linear-lanceolate; ligule long, fimbriate. *Leaves* variable, shortly petioled, pale green, tip setaceous twisted, base unequal rounded, sparsely hairy beneath, midrib beneath yellow shining, nerves 7–12; sheaths striate; ligule long. *Panicle* large, terminal, rachis smooth, heads of spikelets up to 2½ in. diam. *Ovary* ovoid, acuminate and style glabrous, stigma thickened. *Grain* narrow, tipped with the conic style-base.

7. **O. Stocksii**, *Munro in Trans. Linn. Soc.* xxvi. (1868) 130; stems glabrous or softly pubescent, leaves 4–8 by ½–⅔ in., spikelets ½ in. in globose heads spinescent glabrous fertile and sterile, empty gls. 2 ovate mucronate 5–7-nerved, fl. gls. 2 ovate subacute dorsally mucronate, anthers short acute, stigma 1. *Beddome Fl. Sylvat., Forest. Man.* p. ccxxxiii.; *Gamble Bamb. Brit. Ind.* 75, t. 66.

The CONCAN, *Stocks*, &c. (usually cultivated).

Stems slender, grey-green, solid, or tube slender, nodes with a softly pubescent ring; internodes 6–12 in. *Stem-sheaths* 6–9 in. by 3–7 at the base, tapering upwards to a retuse tip, densely brown, strigose, margins ciliate; blade subulate, base dilated into a rounded fringed auricle; ligule ¼ in., deeply fimbriate. *Leaves* very shortly petioled, tip setaceous, base rounded or cuneate, beneath glabrous or hairy, midrib narrow, nerves 5–6; sheath striate; ligule rather long, toothed. *Panicle* large; heads 1 in. diam., mixed with chaffy bracts, rachis smooth, internodes 1–2 in. *Anthers* short, acute. *Ovary* and long style hairy, stigma simple, plumose.

8. **O. Bourdilloni,** *Gamble Bamb. Brit. Ind.* 76, t. 67; stem-sheaths coriaceous nearly glabrous, leaves 6–9 by 1–1½ in., mouth of leaf-sheath with 2 shining calli, spikelets ⅔–¾ in. in globose heads glabrous, rachis soft, empty gls. 2 ovate mucronate many-nerved, fl. gls. 3, mucronate lowest much longer than the next, rachilla ciliate and bearing a setaceous gl., anthers apiculate, stigmas 3, short.

TRAVANCORE; on the Ghats, alt. 3–4000 ft., *Bourdillon.*

Stem in open clumps of straggling habit, soft, internodes long. *Stem-sheaths* 6–12 by often 6 in., glabrous, except a few black bristles below, slightly narrowed upwards, tip truncate; blade 2–3 in., triangular, decurrent and forming two rounded recurved entire wings that line the upper edge of the sheath; ligule short. *Leaves* shortly petioled, thin, tip twisted, scabrous covered above with scabrid papillæ near the margins and midrib, smooth beneath; midrib narrow, nerves 7–8; sheath soft, striate; ligule long, serrate. *Panicle* large spikelets in globose heads 1½–2 in. diam., rachis fistular. *Palea* of lower fls. 3-nerved between the ciliate keels, rachilla ciliate with a terminal imperfect gl. *Ovary* and *style* hairy. *Grain* linear-oblong, tipped with the thickened style-base.

138. DENDROCALAMUS, *Nees.*

Arborescent unarmed Bamboos, with densely branching rootstocks. *Leaves* shortly petioled, transverse nervules represented by pellucid glands. *Spikelets* in globose clusters on the long branches of a compound panicle, ovate, 2–6-fld.; empty gls. 2–3, ovate, acute, many-nerved; flg. gls. like the empty; palea of lower fls. keeled, of upper dorsally rounded eciliate. *Lodicules* 0 or rare. *Stamens* 6, filaments free. *Ovary* hairy above, often depressed, stigma usually simple. *Grain* small, pericarp coriaceous or crustaceous.—Species 16 known.

Sect. I. *Spikelets* hard, spinescent, crowded in spicate heads.—Leaves usually narrow.

1. **D. strictus,** *Nees in Linnæa*, ix. (1834) 476; leaves up to 10 by $1\frac{1}{4}$ in., shortly suddenly petioled softly hairy beneath, spikelets $\frac{1}{4}$–$\frac{1}{2}$ in. hairy spinescent fertile and smaller sterile mixed, empty gls. 2 or more ovate spinescent many-nerved, flg. gls. ovate tip spinescent and pubescent, palea of lower 6–7-nerved between the ciliate keels, anthers apiculate. *Miq. Fl. Ind. Bat.* iii. 421; *Munro in Trans. Linn. Soc.* xxvi. (1868) 147; *Beddome Fl. Sylvat.* t. cccxxv., *Forest. Man.* p. ccxxxv.; *Brandis For. Fl.* 569, t. 70; *Kurz For. Flor. Burma.* ii. 558, *Ind. Forester*, i. 346; *Aitchis. Cat. Panjab. Pl.* 171; *Duthie Fodd. Grass. N. Ind.* 71; *Gamble Bamb. Brit. Ind.* 78, t. 68, 69. Bambos stricta, *Roxb. Corom. Pl.* i. 58, t. 80. Bambusa stricta, *Roxb. Fl. Ind.* ii. 193; *Kunth in Journ. Phys.* xlv. (1822) 148; *Enum. Pl.* i. 431; *Ruprecht Bamb.* 56, t. 12, f. 56; *Steud. Syn. Gram.* 330; *Dalz. & Gibs. Bomb. Fl.* 299. B. verticillata, *Rottl. ex Munro l. c.* B. pubescens, *Lodd. ex Lindl. in Penny Cyclop.* iii. (1835) 357. B. Tanæa, *Ham. ex Wall. Cat.* n. 5038 A.—Bambusa, *Wall. Cat.* n. 5038.

Dry hills of N. INDIA, from Garwhal to Nepal and southward from the PANJAB to BEHAR, the CONCAN, CENTRAL and S. INDIA, BURMA, and GREAT COCOS ISLD. (Not in Ceylon.)—DISTRIB. Java.

Stems 20–50 ft. by 1–3 in. diam., hollow in moist climates, solid in dry, young glaucous green, old yellowish, nodes swollen, lower often rooting, internodes 12–18 in., upper branches decurved. *Stem-sheaths* variable, lower 3–12 in., glabrous or strigose with yellow-brown hairs, striate, top rounded ciliate, slightly auricled; blade triangular, hairy, especially within; ligule narrow. *Leaves* deciduous, narrowed from the rounded petioled base to the twisted tip, midrib prominent, nerves 3–6 pairs with interposed pellucid glands; sheath striate hairy, callus prominent, auricle short ciliate with flexuous deciduous hairs; ligule narrow, serrate. *Panicle* large, heads dense, 1–$1\frac{1}{2}$ in., much smaller in S. Indian forms; rachis smooth, internodes $1\frac{1}{2}$–2 in. *Spikelets* usually hairy. *Ovary* stipitate, turbinate, style long, stigma simple feathery. *Grain* broadly ovoid, shining, beaked, hairy above.

Var. *Prainiana*, Gamble l. c. 80, t. 69, fig. A.; spikelets smaller, fls. fewer, fl. gls. nearly glabrous. Great Cocos Isld., *Prain.*

2. **D. sericeus,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 148; characters of *D. strictus*, but spikelets silkily hairy, anther-tips obtuse. *Gamble Bamb. Brit. Ind.* 81, t. 70.

BEHAR, summit of Parus-nath, alt. 4000 ft., *J. D. H.*, &c.

(I should regard this as a variety of *D. strictus* had it not been retained by Munro & Gamble. The latter describes the empty gls. as obtuse, but they are acute in the plate referred to.—J. D. H.)

3. **D. membranaceus,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 149; stems scurfy when young, leaves 5–10 by $\frac{1}{2}$–$\frac{3}{4}$ in. hispid above, spikelets $\frac{1}{2}$ in., glossy nearly glabrous, empty gls. 2 ovate obtuse or acute, fl. gls. 2–3 ovate mucronate glabrous margins often ciliate, anthers apiculate. *Kurz For. Fl. Burma*, ii. 560; *Gamble Bamb. Brit. Ind.* 81, t. 71.

EASTERN BURMA, *Wallich*, &c.

Closely resembles glabrous forms of *D. strictus*, but stem-sheaths with waved hairy auricles, leaves thinner, base less rounded, grain more elongate, and grooved.

Sect. II. *Spikelets* in large soft congested heads. *Leaves* usually broad.

4. **D. sikkimensis,** *Gamble in Hook. Ic. Pl.* t. 1770, *Bamb. Brit. Ind.* 82, t. 72; stem-sheaths felted with golden brown hairs, leaves 6–10 by 1½–2 in. oblong-lanceolate strigosely hirsute and rough beneath, mouth of leaf-sheaths fringed, spikelets ½–⅔ in. in large globose red-brown heads lanceolate subobtuse glabrous, empty gls. 3–4 ovate keeled keels ciliate, flg. gls. 2–3 ovate mucronate glabrous margins ciliate, anthers acute. *Gard. Chron.* (1890), i. 792, fig. 130, II. 279 (1892), ii. 675 *cum Ic.*

EASTERN HIMALAYA; Sikkim and Bhotan, alt. 4–6000 ft. GARROW HILLS, on Tura Peak, alt. 3500 ft.

Stem 50–60 ft. by 5–7 in. diam., naked below, dark green, nodes ringed, internodes 18 in., rough. *Stem-sheaths* 12 by 15 in., top broad; blade lanceolate, recurved, hairy on both surfaces, decurrent into two large falcate recurved auricles fringed with long curved pale bristles; ligule sharply serrate. *Leaves* variable, tip black twisted, base rounded, smooth above, midrib prominent, nerves about 10 pairs; sheath smooth, callus small ciliate, auricles fringed with stiff bristles; ligule short, fimbriate. *Panicle* large, branches nodose, heads of spikelets 1½ in. diam., rachis dull brown puberulous, internodes about 2 in. *Palea* of lower fl. obtuse, keels shaggy many-nerved. *Ovary* subglobose, hairy; style short, thick, and clavate stigma hairy. *Grain* depressed obovoid, apiculate, wrinkled below.

5. **D. Hookeri,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 151; stem-sheaths felted with black or brown hairs, leaves 10–12 by 2 in. or more oblong-lanceolate rough beneath, mouth of leaf-sheath not fringed, spikelets about ⅓ in. in large heads ovate acute puberulous, empty gls. 2 ovate obtuse, flg. gls. 2–3 ovate acute many-nerved uppermost mucronate, anthers long tips penicillate. *Brandis For. Flor.* 570; *Gamble Bamb. Brit. Ind.* 84, t. 73. Bambusa globifera, *Griseb. in Goett. Nachr.* (1868), 72.

SIKKIM HIMALAYA, *Anderson*, &c. ASSAM, the KHASIA, JAINTEA, and DUPHLA HILLS, alt. 2–5000 ft., *J. D. H. & T. T.*, &c. BURMA; Bhamo district, *Oliver*.

Stem 50–60 ft. by 4–6 in. diam., naked below, internodes 18–20 in., lower somewhat rough and hairy, walls about 1 in. thick; branches long, curving. *Stem-sheaths* large, old very broad, younger about 16 in. by 8–12 broad at the base, top 2–3 in. broad; auricles 2, rounded, ciliate with stiff hairs; blade 3–7 in., triangular, hairy above; ligule ⅕–⅓ in., sharply serrate. *Leaves* oblong-lanceolate, tip long twisted hispid, base rounded very shortly petioled, midrib very prominent yellow, nerves 8–16 pairs, tessellate by pellucid glands (seen when dry); sheath hairy below, shining above, truncate, sometimes sparingly hairy, callus large; ligule conspicuous, glabrous. *Panicle* large, internodes 2–3 in., dull grey-green, somewhat hirsute; heads of spikelets 1 in. diam.; fl. gls. with transverse nervules. *Ovary* ovoid, acuminate, hairy, style twisted, stigma plumose.

6. **D. Hamiltonii,** *Nees & Arn. ex Munro in Trans. Linn. Soc.* xxvi. (1868) 151; stem-sheaths glabrous, leaves broadly lanceolate cuspidate, spikelets nearly ½ in. long ovoid depressed purple glabrous, empty gls. usually 2 short rounded nerved, flg. gls. 2–4 orbicular margins ciliate, anthers purple with a long black hairy twisted point. *Brandis For. Fl.* 570. Bambusa monogyna, *Griff. Notul.* 63, *Ic. Pl. Asiat.* t. 2. B. maxima, *Ham. ex Wall. Cat.* n. 5039. B. Falconeri, *Munro l. c.* 95, *in part.*

TROPICAL HIMALAYA; from Garwhal (cult. ?) to Sikkim, ASSAM, the KHASIA HILLS, and SILHET.

Stems up to 80 ft. by 4–7 in. diam., much branched above, young appressedly white-pubescent, nodes with root-scars; internodes 12–20 in., walls ½ in. thick.

Stem-sheaths glabrous or with patches of appressed hairs, tip truncate, auricles acute; blade lanceolate, acute, with a small glabrous triangular point on each side, often 12 in., glabrous, margin incurved, with black bristles at the base within; ligule ⅕ in., smooth, entire. *Leaves* variable, small on side branches, up to 15 by 2½ in. in new shoots, base rounded shortly petioled, tips scabrous twisted, margin finely serrate, midrib very narrow, nerves 6–17 pairs with nervules of pellucid glands; sheaths glabrous above, below clothed with white appressed stiff hairs, subkeeled below the shining callus; ligule broad. *Panicle* very large, branches scabrous and white-pruinose, furrowed on one side; internodes 1 in. or less, thick, fistular, scabrid; heads hemispheric, ½–1½ in. diam.; spikelets usually all fertile, surrounded with rounded scarious bracts. *Ovary* subglobose, hairy, style long, stigma 3-fid feathery. *Grain* broadly ovoid, beaked, glabrous or hairy above.

7. **D. patellaris**, *Gamble Bamb. Brit. Ind.* 86, t. 75; stem-sheaths long cylindric margins above with a broad membranous fimbriate wing, leaves 8–16 by 1–4 in. lanceolate base narrow, spikelets depressed-ovoid obtuse, gls. all orbicular cuspidate many-nerved and palea tomentose within, empty gls. 1–2 membranous, flg. 3–5, anthers purple tip conical hairy. Bambusa patellaris, *Kurz in Herb. Calcutt.*

SIKKIM HIMALAYA; below Tonglo, alt. 4000 ft., *Anderson*, &c. NAGA HILLS, *Mann.*

Stems 20–30 ft. by 1–1½ in. diam., dull green, striate, nodes with a hairy belt, internodes 12–18 in., walls thin. *Stem-sheaths* very persistent, 10–12 in. by 3 in. broad, sparsely strigose, glabrous within, narrowed in upper third to a truncate top, margins winged for 1–2 in.; limb 6 in., lanceolate; ligule fringed. *Leaves* persistent, petioled, variable, soft, tip twisted scabrid, midrib stout, nerves 8–10 pairs; sheath striate, keeled, truncate, or produced into a narrow callus, margins fringed; ligule very large, fimbriate. *Panicle* very large, rachis of branches rough, fistular; heads distant, distichous, ½–1 in. diam., bearing hard shining bracts. *Spikelets* many, dark brown, rachilla produced with a terminal imperfect gl. *Lodicules* 0 or 2, narrow, long-ciliate. *Ovary* ovoid, style hairy, stigmas 3.

Sect. III. Spikelets few, in small heads, many sterile.

* *Spikelets long, ovate, acute.*

8. **D. giganteus**, *Munro in Trans. Linn. Soc.* xxvi. (1868) 150; stem-sheaths very large nearly glabrous, leaves up to 20 by 4 in. oblong young hairy beneath, spikelets ½ in. ovoid acute spinescent puberulous, empty gls. ovate mucronate striate, fl. gls. 3–6 thin mucronate many-nerved, anthers acuminate. *Kurz Ind. Forester*, i. 346; *Gamble Bamb. Brit. Ind.* 88, t. 76. Bambusa gigantea, *Wall. Cat. Bot. Gard. Calc.* 79; *Voigt Hort. Suburb. Calc.* 719.

TENASSERIM, the MALAY PENINSULA, and PENANG (cult. in Assam and elsewhere in India).

Stems 80–100 ft. by 8–10 in. diam., branched above, nodes hairy, internodes rather short, grey-green, young with waxy scurf, walls thin. *Stem-sheaths* 20 in., as broad at the base, deciduous, thinly strigose with golden hairs, top depressed; blade 5–15 by 3½ in., decurrent into glabrous stiff brown wavy auricles, narrowed above into a short point; ligule 2–5 in., stiff, black, margin serrate. *Leaves* cuspidately acuminate, tips twisted, young hairy beneath, midrib strong, nerves 12–16 pairs, with pellucid cross bars. *Panicle* very large, branchlets slender curved; heads up to 1 in. diam. ½–1 in. apart. *Spikelets* sometimes all flowering, rachilla produced with an imperfect gl. *Ovary* ovoid and long style hairy, stigma simple. *Grain* oblong, obtuse, hairy above.

9. **D. calostachyus,** *Kurz For. Fl. Burma,* ii. 562; stem-sheaths truncate tawny-strigose, leaves 9–12 by 1–2½ in. broadly lanceolate softly hairy beneath, spikelets about ½ in. ovate acute faintly pubescent, empty gls. 2–3 broadly ovate acute many-nerved, flg. gls. 4–6 rather longer, anthers yellow mucro smooth. *Gamble Bamb. Brit. Ind.* 89, t. 77. Bambusa calostachya, *Kurz in Journ. Beng. As. Soc.* xlii. (1873) 249.

UPPER BURMA; Bhamo and Kachin Hills up to 3500 ft., *J. Anderson.*

Stems with appressed silvery hairs; nodes thickened, annulate. *Stem-sheaths* truncate; ligule narrow, subentire. *Leaves* shortly petioled, base rounded, nerves 9–13 pairs, sheaths white-ciliate, mouth truncate, callus small; ligule broad, truncate. *Panicle* of long whip-like curved spikes; rachis flattened on alternate sides, glaucous, subpuberulous; heads of 2–5 spikelets, bracts few small. *Spikelets* subcompressed; flg. gls. with conspicuous transverse nervules; palea 5-nerved and transversely nervuled between the ciliate keels and 1-nerved outside the keels. *Ovary* broadly ovoid, subhemispheric and long style hairy, stigma simple fringed.

10. **D. latiflorus,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 152, t. 6; leaves 7–10 by 1–2 in. broadly lanceolate long-acuminate, spikelets ½–¾ in. few in a head ovate-oblong compressed, gls. many-nerved pubescent, empty gls. 2 short broad acute ciliate, fl. gls. 6–8 broadly ovate suddenly narrowed to a subobtuse point, margins dark colrd. ciliate, anthers pale tipped by a hairy mucro. *Gamble Bamb. Brit. Ind.* 131, t. 117. Bambusa latiflora, *Kurz in Journ. As. Soc. Beng.* xlii. (1873) II. 250. B. verticillata, *Benth. Fl. Hongk.* (*ex Munro*).

UPPER BURMA; Southern Shan States, *King's Collector.*—DISTRIB. China, Formosa.

A very large Bamboo. *Stems* tall, fistular, internodes short, 5 in. diam., cavity large, striate, glabrous. *Leaves* shortly petioled, glabrous, midrib prominent, nerves 9 pairs, transverse nervules many obscure; sheath sulcate, glabrous or hairy between the lines, ligule truncate. *Panicle* large, uppermost spikelets followed by leaf-like bracts 1–1½ in. long, rachis softly hairy, flattened on one side, white-ringed above. *Ovary* ovoid from a broad base and long style hairy, stigmas 1–2.

** *Spikelets short, obtuse.*

11. **D. longispathus,** *Kurz For. Fl. Burma,* ii. 561; stem-sheaths persistent papery strigose with patches of brown hair, leaves oblong- to linear-lanceolate narrowed to the base rough almost white beneath, spikelets ⅕–¼ in. in small heads obtuse nearly glabrous, empty gls. 2–3 obovate obtuse, flg. gls. 2–3 obovate cucullate margins ciliate many-nerved, anthers short tip mucronate black. *Gamble Bamb. Brit. Ind.* 89, t. 78. Bambusa longispatha, *Kurz in Beng. As. Soc. Journ.* xlii. (1873) II. 249.

SILHET, *Mann.* CHITTAGONG, *Lister,* &c. ARRACAN, *Schlich.* BURMA, *Brandis,* &c.

Stems 60 ft., leafy above only, nodes often rooting; internodes 10–24 in. by 3–4 diam., grey-green, walls ½ in. thick. *Stem-sheaths* fragile, 15–20 by 5–7 in., sides parallel till near the depressed sometimes 1-auricled top; blade 12–18 in., lanceolate, dorsally hairy; ligule broad, serrate and often fimbriate. *Leaves* acuminate midrib thick yellow, nerves 8–10 pairs; sheath smooth, glabrous; ligule narrow. *Panicle* large, sometimes leafy, of interruptedly spicate clusters ⅕–⅔ in. broad, with hard polished bracts at the base. *Spikelets* few or many-fld. *Ovary* broadly ovoid, subacute; style rather short, stigma short. *Grain* ovoid, yellow, beaked.

12. **D. Brandisii,** *Kurz For. Fl. Burma,* ii. 560; stem-sheaths thickly coriaceous white-pubescent, leaves 9–12 by 1–2 in. oblong-lanceolate softly

hairy beneath, spikelets ⅕–⅓ in. depressed ovate puberulous, empty gls. 1–2 broadly ovate mucronate, flg. gls. 2–4 similar few-nerved margins ciliate hairy below the tip, anthers short apiculate or penicillate greenish-yellow. *Gamble Bamb. Brit. Ind.* 90, t. 79. Bambusa Brandisii, *Munro in Trans. Linn. Soc.* xxvi. (1868) 209.

BURMA; Pegu, Martaban Hills, and Ruby-mines district, *Kurz*, &c.

Stems 60–100 ft. by 5–8 in. diam., tufted; nodes slightly swollen, internodes ashy-grey, 12–15 in., walls thick. *Stem-sheaths* up to 2 ft. by 12–14 in., top depressed; blade 6–18 in., linear-lanceolate, strigose within, decurrent in small plaited auricles; ligule ½–¾ in., lacerate. *Leaves* base narrowed, petiole wrinkled, midrib stout shining, nerves 10–12 with transverse pellucid glands; young sheaths pubescent, mouth with a few long cilia, callus large, glabrous. *Panicle* large, branches whip-like, rachis densely pubescent flattened on one side, internodes 1–1½ in.; heads ½–¾ in. diam., bracteate; palea with 3-nerved side wings. *Lodicules* 1, 2, or 0, 3-nerved, long-ciliate. *Filaments* short. *Ovary* ellipsoid, hairy, style short, stigmas 2 plumose. *Grain* ovoid, mucronate, hairy above.—Perhaps not different specifically from *D. flagellifer.*

13. **D. flagellifer,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 150; very near *D. Brandisii*, but leaf-base more rounded, rachis of spikes more hairy, heads with fewer spikelets. *Gamble Bamb. Brit. Ind.* 91, t. 80. Bambusa flagellifera, *Griff. mss.* ? B. Bitung, *Schult. Syst.* vii. II. 1354.

TENASSERIM; on Moolyet, alt. 2000 ft., *Beddome.* SINGAPORE, *Ridley.*

A little known species, probably only *D. Brandisii.*

14. **D. longifimbriatus,** *Gamble Bamb. Brit. Ind.* 92, t. 81; leaves 12–14 by 2–3 in. oblong acuminate, auricles of sheath long falcate stiffly ciliate with curved bristles, spikelets very small glabrous, empty gls. broadly ovate striate, flg. gls. 1–2 ovate acute keeled often mucronate, anthers short apiculate.

BURMA; in the extreme south of the Mergui district (*Herb. Calcutt.*).

Leaves very large, base rounded unequal, petiole ½ in. wrinkled, pale and smooth beneath, midrib hairy beneath, nerves 12–18 pairs, transverse nervules of pellucid glands; sheath shining, callus narrow; ligule short, very hairy. *Panicle* large, branchlets solid, short; rachis slender, flexuous, glabrous; heads (young only seen) bracteate. *Ovary* ovoid, glabrous, style hairy, stigma plumose.—An imperfectly known species, best distinguished by the falcate long-fringed auricles of the leaves.

IMPERFECTLY KNOWN SPECIES.

15. **D. Parishii,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 149; panicle of globose interrupted dense heads, spikelets about ⅓ in. ovoid subobtuse nearly glabrous compressed, empty gls. 1–2 ovate acute many-nerved ciliate, flg. gls. 2–3 similar glabrous, upper mucronate tessellately nerved ciliate, anther tip obtusely acute. *Brandis For. Fl.* 570; *Gamble Bamb. Brit. Ind.* 93, t. 82.

The PANJAB HIMALAYA, *Parish.*

Flowers nearest *D. Hookeri* (of which it is possibly a planted specimen), differing in the glabrous gls. and obtusely acute anthers.

16. **D. Collettianus,** *Gamble Bamb. Brit. Ind.* 93, t. 83; heads of spikelets ½–1 in. diam. bracteate with 6–12 fertile and a few sterile fls. rachis pubescent, spikelets ½–¾ in. soft white-pubescent, empty gls. 2 ovate acute many-nerved midrib thickened, flg. gls. 2–4 and an imperfect ovate-

lanceolate shortly mucronate pubescent many-nerved, palea larger than the flg. gl., keels long-ciliate with white hairs, anthers obtusely apiculate.

UPPER BURMA; Fort Stedman, *Abdul Huk.*
The softly white-hairy spikelets are diagnostic.

139. MELOCALAMUS, *Benth.*

Stem semiscandent from a stout rootstock. *Stem-sheaths* hard, cylindric, auricled. *Leaves* large, petioled, transverse nervules 0. *Panicle* large. *Spikelets* in dense heads, very small, rachilla continuous and produced beyond the upper gl.; empty gls. 2, broad, obtuse, many-nerved; flg. gls. 2, bisexual but one only fertile; palea very broad, cymbiform, membranous. *Lodicules* 3, large, ciliate. *Stamens* 6, filaments short, free, anthers obtuse. *Ovary* glabrous, style short, stigmas 2–3 plumose. *Grain* very large, depressed-globose, pericarp tough; seed large, fleshy.

M. compactiflorus, *Benth. in Journ. Linn. Soc.* xix. (1881) 134; *Gamble Bamb. Brit. Ind.* 94, t. 84. Pseudostachyum compactiflorum, *Kurz For. Fl. Burm.* ii. 567; *Ind. Forester,* i. t. II. fig. 13.

EASTERN BENGAL and BURMA; from Silhet to Arracan, Martaban, and the Ruby Mines district.

Stems 15–100 ft. by $\frac{1}{2}$–1 in. diam., rough, spreading and arching over tall trees, nodes thickened; internodes grey green, 14–24 in. *Stem-sheaths* about 6 by 3 in., smooth or strigose, mouth dilated; blade long-acuminate, dilating into a narrow dark reflexed crescentic auricle fringed with stiff bristles, hispid towards the base; ligule narrow, entire. *Leaves* 6–10 by 1–2 in., oblong-lanceolate, tip subulate penicillate twisted, base rounded, petiole hairy, midrib narrow, nerves 8–12 pairs; sheath striate, young strigose, mouth truncate, auricle lunate reflexed; ligule narrow. *Panicle* interrupted, often leafy, heads $\frac{1}{3}$–$\frac{1}{2}$ in. diam., subglobose, rachis flexuous pubescent, laterally flattened. *Spikelets* $\frac{1}{10}$ in., or rather more, obtuse or truncate, 2-cleft; empty gls. ventricose; fl. gls. similar, often ciliate. *Grain* 1–1$\frac{1}{2}$ in. diam., seated in the persistent glumes.

140. PSEUDOSTACHYUM, *Munro.*

Shrubby, rootstock creeping. *Stem-sheaths* short. *Leaves* large, tesselately nerved. *Panicle* with drooping spikes. *Spikelets* small, solitary in the axils of narrow bracts, 1-fld., rachilla produced with imperfect gls.; empty gl. usually solitary, broad, mucronate, about 7-nerved; flg. gl. similar; palea thin, convolute, 2-keeled. *Lodicules* 3–5, large, ciliate. *Stamens* 6, anthers apiculate. *Ovary* linear-oblong, glabrous, style long rigid, stigmas 2 hairy. *Grain* depressed-globose.

P. polymorphum, *Munro in Trans. Linn. Soc.* xxvi. (1868) 142, t. 4; *Gamble Bamb. Brit. Ind.* 96, t. 85.

SIKKIM HIMALAYA, ASSAM, the GARROW HILLS, MUNNIPORE & BURMA, *Griffith,* &c.

Stems up to 50 ft., by 7–12 in. diam., arising singly from the rootstock, often subscandent, nodes hardly swollen, internodes 7–12 in. by 1 in. diam., at first glaucous, walls very thin. *Stem-sheaths* shorter than the internodes, triangular, truncate, strigose with brown hairs, auricle very short with a tuft of stiff bristles; blade long-acuminate in young shoots, base as broad as the truncate top of the sheath; ligule short. *Leaves* 4–14 by 1–2 in., narrowed into the stout $\frac{1}{3}$–$\frac{1}{2}$ in.

petiole, midrib pale, nerves 7–11, nervules oblique; ligule short. *Panicle* large, leafy, branches fascicled, rachis wiry angled. *Grain* subtended by the gls. and lodicules, pericarp crustaceous.—Spikelets in diseased specimens converted into rounded softly hairy masses.

141. TEINOSTACHYUM, *Munro.*

Shrubby or arborescent; stems thin, arching. *Stem-sheaths* usually thin. *Leaves* various. *Panicle* spiciform, on leafy branches. *Spikelets* in bracteate whorls, long, narrow, many-fld., upper and lower fls. imperfect; empty gls 1–2, mucronate; fl. gls. similar, mucros longer; palea convolute, keels ciliate. *Lodicules* 3, 3–9-nerved. *Stamens* 6, filaments free, slender. *Anthers* obtuse or obtusely apiculate. *Ovary* ovoid or depressed-globose, apex produced enclosing the style, stigmas 2–3 plumose. *Grain* ovoid, acuminate, beaked, pericarp crustaceous.—Species the following.

1. **T. Griffithii,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 143, t. 3; stem-sheaths auricled, leaves 6–10 by $\frac{3}{4}$–$1\frac{1}{2}$ in. oblong-lanceolate glaucous beneath, spikelets 2–3 in. linear puberulous, empty gls. 1 or 2 (the second sterile) narrowly ovate mucronate, fl. gls. 3–5 ovate acute mucronate 9–11-nerved, lodicules glabrous. *Gamble Bamb. Brit. Ind.* 98, t. 86. Cephalostachyum Griffithii, *Kurz For. Fl. Burma*, ii. 566.

The KHASIA HILLS, ASSAM, CHITTAGONG & BURMA.

Stems 25–50 by $\frac{1}{2}$–$\frac{3}{4}$ in. diam., slender, arching, straggling or subscandent, branches whorled, internodes 18–26 in., walls thin. *Stem-sheaths* 6 by $1\frac{1}{2}$ in. or more, strigose with white hairs above; blade 3–4 in., dilated into large auricles fringed with long curved reflexed bristles, shaggy within; ligule short. *Leaves* cuspidate, base rounded, petiole wrinkled, midrib with clusters of long hairs at the base, nerves 8–10 pairs with transverse pellucid glands; sheath keeled, auricles falcate and short ligule ciliate with deciduous hairs. *Panicle* leafy, branches often whip-like with few often pedicelled spikelets or axillary fascicles, rachis smooth striate; rachilla jointed between the gls. *Palea* longer than the fl. gl., keels fringed half way down, 4-nerved on each side. *Lodicules* ovate-lanceolate, glabrous, 7–9-nerved. *Anthers* yellow. *Ovary* stipitate, glabrous, style triquetrous. *Grain* obliquely ovoid, tapering at both ends, beaked, glossy.

2. **T. Wightii,** *Beddome Fl. Sylvat.* t. cccxxiii.; *Forest. Man.* p. ccxxxiii. (*excl. Syn.*) stem-sheaths papery hirsute top truncate not auricled, leaves 6–15 by 1–2 in. oblong-lanceolate, panicle with spiciform drooping branchlets, spikelets $\frac{1}{2}$–1 in., empty gl. 1 ovate mucronate 5–7-nerved dorsally hirsute, fl. gls. 1 or 2 mucronate nerved transversely, lodicules short ciliate. *Gamble Bamb. Brit. Ind.* 99, t. 87.

WESTERN GHATS, alt. 3–5000 ft., from N. Canara to Cape Comorin.

Stem 10–20 ft., by 1–$1\frac{1}{4}$ in., semi-scandent, branches pendulous, nodes narrowly ringed; internodes bright green, rough above, walls thin. *Stem-sheaths* 10–12 by 1–$1\frac{1}{4}$ in., hairs black-brown; blade subulate, 5–7 in., decurrent on the sheath; ligule $\frac{1}{10}$ in. *Leaves* acuminate, tip scabrous twisted, whitish and sparsely hairy beneath, midrib broad yellowish, nerves 6–7 pair, tessellate by glands; sheath glabrous; ligule narrow. *Panicle* large, spiciform branches bracteate, rachis smooth, slender. *Rachilla of spikelets* slender, flattened and concave below, thickened and ciliate above. *Lodicules* ovate, 3–5-nerved. *Ovary* stipitate, depressed-globose, smooth, style included in the long beak of the ovary. *Grain* stoutly stipitate, ovoid, beaked, glabrous.

3. **T. attenuatum,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 143;

stem- and leaf-sheaths not auricled pale strigose, leaves 3–6 by ½–1 in., panicle leafy, spikelets 1 in. clustered at the nodes of simple stiff terminal spikes, empty gl. 1 ovate mucronate 7-nerved ciliate, fl. gls. 2–3 longer 9–11-nerved and 1–2 terminal imperfect, lodicules lanceolate tip ciliate. *Beddome Fl. Sylvat. Forest. Man.* p. ccxxxiv.; *Trim. Cat. Ceyl. Pl.* 110; *Gamble Bamb. Brit. Ind.* 100, t. 88. Bambusa attenuata, *Thwaites Enum. Pl. Zeyl.* 375.

CEYLON; Central Province, alt. 4–6000 ft., *Thwaites*, &c.

Stems 12–25 ft. by ½–1 in. diam., tufted, tips filiform, wiry, nodes with many branches. *Leaves* smooth and pale beneath, tip subulate twisted scabrous, midrib faint, nerves 3–4 pairs; sheath sparingly strigose, margins ciliate, mouth truncate, fringed with deciduous bristles; ligule short. *Panicle* leafy, usually of short spikes clustered at the nodes, clusters bracteate composed of several barren spikelets and a few longer often curved fertile, rachis smooth swollen above. *Lodicules* 3-nerved. *Filaments* long, twisted. *Ovary* ovoid, acuminate, glabrous, style long, stigmas 3. *Grain* narrowed at both ends, beaked, glabrous.

4. **T. Dullooa,** *Gamble Bamb. Brit. Ind.* 101, t. 89; stem-sheaths not auricled, leaves variable, spikelets ½–1 in. in a panicle of spiciform branches subtended by long truncate bracts softly pubescent, empty gls. 2 small truncate, flg. gls. ½ in. acuminate hairy 10-nerved, palea as long glabrous convolute not keeled, rachilla jointed produced into a long point.

BHOTAN, ASSAM, SILHET and the hills eastwd. to CHITTAGONG and UPPER BURMA.

Stems 20–30 ft. by 1–3 in. diam., tufted, sometimes scandent; nodes dark green, little prominent; internodes 16–40 in., dark green with a few whitish hairs; glossy, white beneath the nodes. *Stem-sheaths* variable, 4–12 in., strigose with white hairs, top concavely truncate loosely fringed with stiff bristles; blade 3–6 in., narrow, convolute, very hairy within, base rounded; ligule long, fimbriate. *Leaves* oblong-lanceolate, subciliately acuminate, tip twisted scabrid, base rounded, petiole $\frac{1}{6}$–¼ in., pubescent or glabrescent beneath, midrib pale, nerves 6–10 pairs, tessellate by pellucid dots; sheath striate, margins ciliate, mouth with stiff deciduous bristles, callus ciliate or glabrous; ligule long-fimbriate. *Ovary* glabrous; style, long reddish.

5. **T. Helferi,** *Gamble Bamb. Brit. Ind.* 102, t. 90; stem-sheaths thick brittle top truncate with a narrow long-fringed band, leaves 6–18 by 1–3 in. oblong-lanceolate, panicle of long terminal whip-like densely hairy flexuous spikes bearing distant heads of few sterile spikelets which consist of 2–3 striate mucronate hairy empty gls. Bambusa Helferi, *Munro in Trans. Linn. Soc.* xxvi. (1868) 114. Pseudostachyum Helferi, *Kurz in Journ. As. Soc. Beng.* xlii. (1872) ii. 253, *For. Fl. Burm.* ii. 568.

GARROW, KHASIA and JAINTEA HILLS, alt. 3500 ft., PEGU and MARTABAN.

Stems bushy or climbing, 20–40 ft. by 1–1½ in. diam. arching to the ground and rooting, young strigose with white hairs, nodes thickened whitish; internodes 20–50 in., young white-velvety, old with a white band, walls very thin. *Stem-sheaths* 8–10 in., persistent, sparsely strigose with white bristles; blade lanceolate, glabrous or shortly hispid, decurrent on a fringed band on the top of the sheath; ligule narrow, fringed with stiff white hairs. *Leaves* very variable, unequal-sided, cuspidately acuminate, glabrous and glaucescent beneath, midrib stout, nerves 7–15 pairs, tessellate by pellucid glands; sheath glabrous, auricle long-fringed deciduous, callus smooth; ligule narrow, fringed with fragile hairs.—Very near *T. Griffithii.*

142. CEPHALOSTACHYUM, *Munro.*

Shrubby bamboos. *Stems* slender, straight. *Stem-sheaths* auricled. *Leaves* various, shortly petioled. *Spikelets* 2, in terminal globose heads, or a panicle of bracteate heads, 1-fld., elongate, rachilla produced beyond the fl.; empty gls. 2–3, broad, chaffy, many-nerved, usually long-awned; flg. gls. more membranous, convolute, awns shorter; palea thin, many-nerved, keels 2 approximate. *Lodicules* 3, 3–5-nerved. *Stamens* 6, free, anthers long. *Ovary* stipitate, ovoid, narrowed into a long thickened style, stigmas 2–3, plumose. *Grain* oblong, beaked, pericarp separable.—Species all Indian.

* *Spikelets in a solitary head.*

1. **C. capitatum,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 139; leaves 4–8 by 1–2 in. ovate-lanceolate base unequally rounded, head 1–1½ in. diam., bracts broad long-awned glabrous, spikelets ½–⅔ in. terminating short spikes, palea obtusely mucronate tip entire, anthers obtuse. *Gamble Bamb. Brit. Ind.* 104, t. 91. Bambusa capitata, *Wall. Cat.* n. 8913.

SIKKIM and BHOTAN HIMALAYA, alt. 2–8000 ft., KHASIA, JAINTEA, and NAGA HILLS.

Stems 12–30 ft. by 1–1½ in., semi-scandent; nodes not prominent, internodes often 3 ft. or more, walls thin. *Stem-sheaths* of young stems papery, 6–12 by 2–3 in., strigose with pale brown hairs, mouth triangular, of the longer upper truncate, of the shorter lower retuse; blade long, hairy within, base rounded, decurrent into rounded sometimes fringed auricles; ligule narrow. *Leaves* pale green, whitish beneath, glabrous on both surfaces, midrib prominent, nerves 4–10 pairs, pellucid dots oblique; sheaths smooth, shining, auricle short with curved cilia. *Empty gls.* softly hairy below; lower 1–3 flg. gls. sterile; palea hairy between the keels, rachilla produced. *Lodicules* ovate-lanceolate, 3–5-nerved, shortly ciliate. *Anthers* long, tips emarginate. *Ovary* ovoid, style often twisted, stigmas 2 hairy. *Grain* depressed-ovoid, beaked, shining, pericarp crustaceous.

Var. *decompositum,* Gamble l. c. 105; spikelets in spicate almost paniculate clusters, many fertile.—Sikkim and Khasia Hills.

2. **C. pallidum,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 139; leaves 1–5 by ½–1 in. base unequally rounded, heads about 1 in., bracts broad rounded, spikelets ⅔–¾ in., palea 2-fid, anthers long-apiculate. *Kurz For. Fl. Burma,* ii. 563; *Gamble Bamb. Brit. Ind.* 105, t. 92. Bambusa andropogonifolia, *Griffith Itin. Notes,* 124, No. 417.

KHASIA, MISHMI, PATKOY and MUNNIPORE HILLS, ascending to 5000 ft., *Griffith,* &c.

Shrubby or subarboreous, branches whorled. *Leaves* pale green, tip capillary, glabrous or puberulous beneath, not tessellate, midrib pale, nerves 4–6 pairs; sheath striate, margins ciliate, auricle rounded with a few deciduous cilia; ligule long. *Head* in the axil of a leaf, of many- long-awned empty gls. or sterile fl. gls. or with a few exserted fertile spikelets, all bracteate at the base; empty gls. concave, awned, many-nerved; flg. gls. similar, awn shorter than the gl.; palea many-nerved, tip and base hairy, rachilla shortly produced. *Lodicules* pubescent and ciliate. *Ovary* ovoid-lanceolate, style long conical, stigmas 2 hairy. *Grain* globosely ovoid, top conical and beaked, wrinkled.

3. **C. latifolium,** *Munro in Trans. Linn. Soc.* xxvi. (1868) 140; stem sheaths linear, oblong top narrow, leaves 10–16 by 1–4 in. ovate or ovate-lanceolate base unequal cuneate or rounded, sheaths not fringed, heads 1½–2 in. diam. of clustered sterile and 1-fld., fertile spikelets ½–1 in. long with broad awned bracteoles, tip of palea entire, anthers obtusely mucronate. *Gamble Bamb. Brit. Ind.* 106, t. 93.

BHOTAN and MUNNIPORE HILLS, alt. 5–7000 ft., *Griffith,* &c.

Shrubby semi-scandent. *Stems* thin, rough, dark green, whitish below the nodes which are conspicuously ringed. *Stem-sheaths* 6–9 by 2–3 in., papery, sides parallel, top concave with sub-acute triangular glabrous auricles; blade 4–5 by $\frac{1}{3}$–$\frac{1}{2}$ in., subulate; ligule broad. *Leaves* glabrous, base cuneate or rounded, petiole wrinkled, midrib pale prominent, nerves 8–18 pairs, pellucid dots distant; sheath striate, margins ciliate produced up to the broad ligule; callus broad, thick, emarginate. *Spikelets* glabrous, empty gls. ovate-lanceolate, glabrous, long-awned; flg. gls. acuminate, awn shorter; palea obtuse, tip hairy, nerves reticulate; rachilla shortly produced. *Lodicules* 3-nerved. *Ovary* ovoid, style long flattened, stigmas 2 short plumose. *Grain* broadly ovoid, stipitate, curved above, beaked, pericarp crustaceous.

4. **C. Fuchsianum,** *Gamble Bamb. Brit. Ind.* 107, t. 94; stem-sheaths thin top deeply concave with a bristly fringe in the sinus, leaves 8–14 by 2–4 in., ovate-lanceolate, head $2\frac{1}{2}$ in. diam., simple globose or compound elongate and lobed, spikelets $\frac{3}{4}$–1 in. glabrous sterile and fertile mixed with awned bracts, palea 2-fid anther tip apiculate or forked.

BHOTAN and the DUPHLA HILLS, alt. 6–8000 ft., *Fuchs*, *Lister*, *Gammie*, &c.

Arborescent, semi-scandent; stems small, soft, thin-walled, pale, branches whorled. *Stem-sheaths* 12 by 4 in., strigose with light brown hairs, sides nearly parallel, margins reticulately nerved, young cylindric; blade in the base of the sinus, 6–8 in., subulate, pubescent below; ligule small. *Leaves* cuspidately acuminate, base angled or rounded, midrib shining, nerves 7–10 pairs, tessellate by pellucid dots; sheath soft, margins thickly long-ciliate, auricle elongate thickly clothed with white bristles $\frac{1}{2}$–$\frac{2}{3}$ in. long; ligule moderate, ciliate. *Empty gls.* ovate, long-awned, glabrous, 17–19-nerved; flg. gl. longer, awn shorter, 21–23-nerved and cross-nervuled; palea pubescent, 2-keeled and 5–6-nerved on each side; rachilla shortly produced. *Lodicules* 3–5-nerved, ciliate. *Ovary* narrowly ellipsoid, style thick, stigmas 2 short. *Grain* as in *C. latifolium*, but tip more rounded, pericarp crustaceous.

** *Spikelets in panicled or spicate heads or fascicles.*

5. **C. pergracile,** *Munro in Trans. Linn. Soc.* xxvi. (1863) 141; stem-sheaths very short 2-auricled strigose with black deciduous hairs afterwards polished, leaves 6–14 by 1–$2\frac{1}{2}$ in. linear-lanceolate rough on both surfaces, spikelets $\frac{1}{2}$–$\frac{2}{3}$ in. diam. bracteate clusters forming filiform drooping spikes, gls. 3–4, empty gls. 0, lower 1–2 sterile, fertile solitary densely hairy with a terminal sterile, palea long 2-fid, anthers obtuse purple. *Kurz For. Fl.* ii. 564; *Gamble Bamb. Brit. Ind.* 108, t. 95.

Throughout BURMA, ASSAM, The NAGA HILLS and CHOTA NAGPORE.

Arboreous, deciduous. *Stems* 30–40 ft. by 2–3 in. diam., tufted, erect, glaucous, whitish below the scarcely thickened nodes; internodes 12–18 in., walls very thin. *Stem-sheaths* 4–6 by 6–8 in.; blade 2 in., densely hairy within, decurrent in a waved fringe bordering the top of the sheath and fringed auricles; ligule very narrow. *Leaves* thin, base rounded or cuneate, subglaucous beneath, midrib conspicuous, nerves 7–13 pairs, sparingly tessellate; sheath glabrous, mouth auricled, callus small ciliate; ligule very narrow. *Panicle* large; heads $1\frac{1}{2}$–2 in. apart, bracts small chaffy, rachis wiry. *Lodicules* narrow, tip ciliate. *Ovary* smooth, base subglobose, narrowed into a trigonous style, stigmas 2–3 stout. *Grain* $\frac{1}{4}$ in., obovate-oblong, grooved on one side, beak as long as itself.

6. **C. flavescens,** *Kurz in Journ. As. Soc. Beng.* xlii. (1873) ii. 252, *For. Fl. Burm.* ii. 564; stem-sheaths short, top triangular truncate smooth or strigose with white or pale brown hairs, leaves 3–6 by $\frac{1}{2}$–$\frac{3}{4}$ in. linear, sheath with narrow auricles, spikelets $\frac{1}{2}$ in. long linear acuminate hairy, empty gls. 1–2 ovate-lanceolate mucronate hairy 7–9-nerved, fl. gl. solitary similar, palea 2-mucronate, anthers obtuse or acute yellow.

Gamble Bamb. Brit. Ind. 109, t. 96. Melocanna lutescens, *Kurz in Herb. Calcutt.*

BURMA; Pegu? (cult. in Calcutta and Madras gardens).

Evergreen, subarborescent. *Stems* 10–20 ft. by 1–1½ in. diam., smooth, dull green, at length yellow, nodes not prominent; internodes rather long. *Stem-sheaths* 4–5 by about 5 in., smooth or strigose with pale or brown hairs; blade 1–1½ in., erect, base cordate decurrent as a waved fringe with pointed long auricles edged with stiff curved bristles; ligule narrow. *Leaves* acuminate, glabrous or sparsely hairy beneath, base contracted, midrib narrow, nerves 4–6 pairs; sheath smooth, glabrous, callus very narrow, auricles long narrow; ligule narrow. *Panicle* of few whorled slender branches with clusters of spikelets 2–2½ in. apart; palea with hairy margins. *Lodicules* oblong, tip ciliate, 3–5-nerved. *Ovary* ovoid, acuminate, smooth; style trigonous, stigmas white-hairy.

7. **C. virgatum,** *Kurz For. Fl. Burma,* ii. 565; panicle leafless drooping, branchlets fascicled bearing lax distant heads of few nearly glabrous fertile and sterile spikelets, rachis smooth flattened on one side, spikelets ½ in. nearly glabrous narrow acute with 2 small sterile fls. at the base, empty gl. short ovate mucronate, flg. gl. convolute coriaceous mucronate, palea 2-mucronate, anthers obtuse. *Gamble Bamb. Brit. Ind.* 110, 132, t. 97. Melocanna virgata, *Munro in Trans. Linn. Soc.* xxvi. (1868) 133.

UPPER BURMA; on the Mogaung river, *Griffith*; Bhamo district, *Oliver*.

A medium-sized, slender, tufted Bamboo. *Stems* erect, dark green, young white scurfy, nodes not thickened; internodes 18–24 by 4 in. diam., regular, walls thin. *Stem-sheaths* 6–8 by 7–10 in. broad at the base, pale, narrowed to a nearly straight top 5–6 in. broad, strigose with golden hairs; blade 4–5 in., usually recurved, decurrent along the top of the sheath in a narrow straight band bordered with stiff recurved bristles, glabrous above, strigose beneath; base 1–1½ in. broad cordate, tip cuspidate, margins incurved; ligule narrowed, fimbriate. *Leaves* rather variable, thin, 6–12 by 1¼–2¾ in., oblong- to linear-lanceolate, cuspidately acuminate, rough on both surfaces, tip and margins scabrous, pale beneath and slightly hairy, mid-rib pale broad, nerves 10 pairs with 5–7 intermediate, cross-nervules few; sheath smooth, striate, keeled, ending in a narrow ciliate callus, and bearing short bristly auricles; ligule very short, fimbriate. *Panicles* large, heads bracteate; bracts narrow chaffy. *Lodicules* lanceolate, acuminate, shortly ciliate, faintly 3-nerved. *Ovary* ovoid, glabrous, style thickened; stigmas 2–3, purple, plumose.

143. DINOCHLOA, *Büse.*

Lofty evergreen scandent Bamboos. *Stems* zigzag, usually covered with persistent sheaths; nodes with a broad leathery ring left by the sheath. *Stem-sheaths* thick, loosely clasping, base wrinkled. *Leaves* large, rather soft, transverse nervules of pellucid glands. *Panicle* large, compound, of slender spicate clusters of spikelets. *Spikelets* very many, minute, in subglobose sessile heads on short branchlets, 1-fld.; rachilla inarticulate, not produced; empty gls. 1–4 broad, very obtuse, upper gradually larger; fl. gl. similar; palea convolute, not keeled, as long or longer than the gl. *Lodicules* 0. *Stamens* 6, free short. *Ovary* ovoid, glabrous, style short. *Grain* ovoid, acuminate.—Species, the following.

1. **D. Tjankorreh,** *Büse in Miq. Pl. Jungh.* 388; stem-sheaths narrowed to the mouth, leaves 6–10 by 1–1½ in. *Miq. Fl. Ind. Bat.* iii. 415; *Munro in Trans. Linn. Soc.* xxvi. 153, t. 5; *Kurz Ind. Forester*, 352; *Gamble Bamb. Brit. Ind.* 112. Bambusa scandens, *Blume ex Nees in*

Flora, vii. (1824) 291. Nastus Tjangkorreh, *Schultes Syst. Veg.* vii. 1358; *Kunth Enum. Pl.* i. 430; *Steud. Syn. Gram.* 333. Chusquea amplopaniculata, *Steud. l.c.* 337; *Miq. l. c.* 415.

MALAY PENINSULA; Perak, *Ridley*.—DISTRIB. Malay and Molucca Islds.

Stems 100 ft. by 1 in. diam. or more, green, glossy, nodes swollen, of the branches often thorny; internodes 9–18 in., hairy above, walls thin. *Stem-sheaths* loose, leathery, cylindric, narrowed to the non-auricled mouth, sparsely bristly; blade ovate-lanceolate, minutely hispid above; ligule rather broad. *Leaves* lanceolate, rather soft, base narrowed, petiole very hairy, smooth on both surfaces, mid-rib conspicuous, nerves 7–9 pairs; sheaths strigose at length glabrous, mouth rounded with long white bristles; ligule rather broad, long-ciliate. *Panicle* compound, branches thin, wiry; rachis curved, striate, flattened on one side; nodes with a ring formed by the base of the fallen bracts; clusters with few fertile and many empty gls. *Spikelets* $\frac{1}{10}$ in. or less, ovoid, glossy, brown, glabrous; empty gls. with 1–2 smaller at the base, convolute, 5–7-nerved; flg. gl. similar. *Stamens* included, anthers acute. *Stigma* 2-fid, not plumose. *Grain* $\frac{1}{10}$–$\frac{1}{5}$ in., fleshy.

Var. *andamanica*, Gamble l. c. t. 93; spikelets straw-colrd., leaves up to 12 by 2 in. softly ovate-lanceolate, mouth of sheaths more ciliate, ligule more fimbriate. D. andamanica *Kurz in Journ. As. Soc. Beng.* xlii. (1873) ii. 253, *For. Fl. Burm.* ii. 570.—Andaman and Nicobar Islds., *Sieber*, *Kurz*, &c.

2. **D. M'Clellandi,** *Kurz in Journ. As. Soc. Beng.* xlii. (1873) ii. 253, *For. Flor. Burm.* ii. 371 (Maclellandi); stem-sheaths truncate at the mouth, leaves 6–18 by 1–4 in. *Gamble Bamb. Brit. Ind.* 113, t. 99. Bambusa M'Clellandi, *Munro in Trans. Linn. Soc.* (1868) 114.

CHITTAGONG, PEGU and MARTABAN, *Kurz*, &c.

Stem climbing, 100 ft., or short and straggling, 1–2 in. diam., grey green, nodes swollen; internodes 6–8 in., young often angled, strigose with brown pungent hairs. *Stem-sheaths* 6–9 in. by 7–9 in. at the base and 2–3 at the top, cylindric, leathery, strigose with golden-brown hairs ending in a narrow dark glabrous margin and top; blade lanceolate, glabrous without, densely hairy within, base rounded decurrent on the sheath; ligule entire or subserrate. *Leaves* broadly oblong-lanceolate, base unequally rounded, narrowed into a broad thick petiole $\frac{1}{2}$ in. long or less, glabrous on both surfaces, one or both margins retrorsely scabrid, mid-rib prominent, nerves 10–18 pairs; sheath transversely nerved, keeled, at first strigose, mouth produced into a rounded naked auricle; ligule entire or serrate.

144. SCHIZOSTACHYUM, *Nees.*

Erect or climbing, arborescent or shrubby Bamboos; stems usually slender, smooth, walls thin. *Stem-sheaths* short, cylindric, auricles small. *Leaves* broad, petioled. *Panicle* terminal, of spicate branches bearing heads of spikelets, often reduced to a spike of heads, rachis slender. *Spikelets* slender, fascicled, peduncled or 2–3-nate; empty gls. 1–3, narrow, usually mucronate, rachilla elongate between them and much beyond with a rudimentary gl.; fl. gls. 1–2, articulate below, convolute; palea like its gl., convolute, not keeled. *Lodicules* 0–4, narrow. *Stamens* 6, exserted, anthers narrow, filaments free. *Ovary* narrow, pericarp produced as a tubular beak enclosing the style, stigmas 3 short plumose. *Grain* ovoid, beaked, beak inclined, pericarp crustaceous; seed rounded.—Species 16, trop. Asia and Pacific.

* *Heads of spikelets in terminal simple spikes.*

1. **S. tenue,** *Gamble Bamb. Brit. Ind.* 114, t. 100; leaves 4–6 by

$\frac{1}{3}$–$\frac{1}{2}$ in. linear-lanceolate, heads 1–3 in a spike bracteate, spikelets few about $\frac{1}{2}$ in. long, empty gls. 1–2 ovate acute 5–7-nerved, flg. gl., longer. ? S. elegantissimum, *Kurz Ind. Forester*, i. 348. (Bambusa elegantissima, *Hassk. Pl. Jav. Rar.* 42. Beesha elegantissima, *Kurz ex Munro in Trans. Linn. Soc.* xxvi. (1808) 146).

MALAY PENINSULA; Pahang, Malacca and Johore, *Ridley*.

Stems graceful, slender, scandent. *Leaves* narrowed into a rather long petiole, smooth and glabrous on both surfaces, midrib shining, nerves 3–5 pairs, distantly tessellate by glands, sheaths smooth truncate, callus broad; ligule very narrow. *Rachis of spikes* slender, curved; bracts chaffy, mucronate, yellowish. *Spikelets* narrow, acuminate; palea longer than its gl., 2-keeled, glabrous, 2-mucronate. *Lodicules* ovate, acute, 3–5-nerved. *Stamens* exserted, anthers linear tips rounded.

2. **S. chilianthum**, *Kurz in Journ. As. Soc. Beng.* xxxix. (1870) II. 88, *Ind. Forester*, i. 348; leaves 6–10 by $\frac{3}{4}$–1 in. linear-lanceolate, heads 3–6 in a spike, spikelets about $\frac{1}{2}$ in. long, empty gls. ovate mucronate striate glabrous, flg. gl. longer. *Gamble Bamb. Brit. Ind.* 115, t. 101. Chloothamnus chilianthus, *Buese in Pl. Jungh.* 387; *Miq. Fl. Ind. Bat.* iii. 415. Melocanna gracilis, *Kurz ex Munro in Trans. Linn. Soc.* xxvi. (1868) 133.—Bambusa, *Wall. Cat.* n. 5032.

Stem 6–8 ft. by $\frac{1}{2}$–$\frac{3}{4}$ in. diam., smooth, glossy, nodes not prominent; internodes fistular, glabrous; flowering and leafing branches together half-whorled at the nodes with many bract-like sheaths; branchlets slender, curved, smooth. *Stem-sheaths* glabrous, smooth, truncate, margins ciliate; blade narrowly lanceolate, base rounded, hairy, decurrent in a long fringed band, auricles narrow long-fringed; ligule narrow long-fringed. *Leaves* long acuminate, setaceous point sometimes $1\frac{1}{2}$ in., midrib not prominent, nerves 4–6 pairs, tessellate by pellucid glands; sheath glabrous, mouth truncate bearing about 10 stiff white deciduous bristles, auricles short, callus narrow. *Heads* about $\frac{1}{2}$ in. broad, rachis slender, grooved, glabrous. *Spikelets* acuminate. *Paleæ* 2, mucronate, keeled above only. *Lodicules* 3, 3–5-nerved, ciliate. *Ovary* oblong, stigmas 3 plumose purple. *Grain* nearly $\frac{1}{2}$ in., beak inclined.

** *Heads of spikelets in panicled spikes.*

3. **S. Blumei**, *Nees Agrost. Bras.* 535; leaves 9–10 by $1\frac{1}{4}$–$1\frac{3}{4}$ in. on sterile branches up to 16 in. oblong-lanceolate, spikelets under $\frac{2}{3}$ in. cylindric, rachilla ciliate, empty gls. 2 oblong long-mucronate glabrous, flg. gl. longer, paleæ 1 or 2 inner convolute, lodicules 0, anthers obtuse. *Kunth Enum. Pl.* i. 435; *Rupr. Bamb.* 43, t. 16, 17, f. 4; *Steud. Syn. Gram.* 332; *Miq. Fl. Ind. Bat.* iii. 424; *Munro in Trans. Linn. Soc.* xxvi. (1868) 136; *Kurz Ind. Forester*, i. 350; *Gamble Bamb. Brit. Ind.* 116, t. 102. Melocanna tenuispiculata, *Kurz in Hort. Buitenz. and Calc.*

SINGAPORE, *Ridley*.—DISTRIB. Java.

Stems 30 ft., hollow, fragile, glabrous. *Stem-sheaths* cylindric, slightly narrowed to the ciliate truncate mouth, strigose with white bristles; blade leafy, erect; ligule narrow. *Leaves* acuminate, base rounded or narrowed, rough on both surfaces, pubescent beneath, midrib narrow, nerves 5–6; sheath smooth, keeled, mouth truncate and margins ciliate with white bristles; ligule short fimbriate. *Spikes* of panicle with long spreading erect or deflexed spikelets $\frac{1}{2}$–$\frac{2}{3}$ in. long and chaffy bracts, rachis very slender; empty gls. 2, striate. *Anthers* green, obtuse. *Ovary* narrowly ellipsoid.

4. **S. latifolium**, *Gamble Bamb. Brit. Ind.* 117, t. 103; leaves 9–12 by $1\frac{1}{2}$–$2\frac{1}{2}$ in. oblong acuminate, spikelets 1–$1\frac{1}{3}$ in. long acuminate, empty

gls. 2 oblong long-mucronate, flg. gls. 1 much larger ovate-lanceolate long mucronate convolute, lodicules 3–4, anthers obtuse tip penicillate.

MALAY PENINSULA; Pahang, *Ridley*.

Leaves smooth on both surfaces, base rounded, petiole $\frac{1}{3}$ in. wrinkled, midrib prominent beneath, nerves 10–12 pairs; sheath keeled, smooth, callus broad, auricle large falcate bearing long bristles; ligule short, long-ciliate. *Panicle* 6–12 in. *Spikelets* mixed with ovate-lanceolate glabrous bracts, shortly pedicelled; empty gls. distant at the base; margins of flg gl. often ciliate; palea lanceolate, 2-mucronate, dorsally keeled or channelled. *Lodicules* 3–4, $\frac{1}{10}$–$\frac{1}{3}$ in., 4th longer (a modified stamen?). *Anthers* long, narrow. *Ovary* narrowly lanceolate.—Near *S. longispiculatum*, Kurz Ind. Forester, i. 351, but differs in the presence of lodicules and in the penicillate anther-tips.

5. **S. aciculare,** *Gamble Bamb. Brit. Ind.* 117, t. 104; leaves 6–9 by $1\frac{1}{2}$–2 in. ovate-oblong cuspidate, petiole pubescent, spikelets $1\frac{1}{4}$–$1\frac{1}{2}$ in. needle-like, empty gls. 2 oblong mucronate pubescent, flg. gl. linear convolute appressedly hairy long-mucronate, lodicule 1, anthers obtuse tip penicillate.

MALACCA; at Rupayoong, *Alwis*.

A small bamboo. *Leaves* almost elliptic, base rounded or narrowed, tip an obtuse scabrous hairy point, pale and smooth beneath, midrib hardly prominent, nerves 10 pairs; sheath smooth, mouth with a few long bristles, callus rounded. *Spikes* slender, rachis flattened on one side; bracts few, short. *Spikelets* very long, narrow, on short bracteate peduncles; empty gls. 2, pubescent, oblong, mucronate; palea as long as the flg. gl., mucronate, glabrous; rachilla short, grooved, glabrous. *Lodicule* 1, narrowly lanceolate, glabrous. *Anthers* very long, narrow. *Ovary* narrowly ovoid, glabrous.

145. MELOCANNA, *Trin.*

Arborescent unarmed Bamboos. *Stems* solitary on the branches of a rhizome, distant. *Stem-sheaths* short, brittle, shortly auricled, blade very long. *Leaves* broad, petioled, smooth. *Panicle* large, compound, of spicate one-sided spikelets. *Spikelets* 2–3, fascicled in bracts in the axils of the spikes, acuminate with 1 fertile and 1 or more sterile fls.; empty gls. indefinite, acuminate, mucronate, striate; fl. gl. similar; palea like its gl. convolute not keeled. *Lodicules* 2, narrow. *Stamens* 5–7, free or irregularly connate. *Ovary* glabrous, style elongate, stigmas 2–4 shortly hairy. *Fruit* very large, pyriform, long-beaked, pericarp very thick.—Species 1 or 2.

1. **M. bambusoides,** *Trin. in Spreng. Neue Enterdeck.* ii. 43, *Syst.* ii. 113 (*excl. Syn. Lour.*); stem-sheaths 5–6 in. strigose with whitish hairs abruptly truncate with rounded auricles, leaves 6–14 by 1–3 in. lanceolate or oblong-lanceolate, spikelets about $\frac{1}{2}$ in. spinous glabrous, empty gls. 2–4 lanceolate, flg. gl. similar but thinner. *Rupr. Bamb.* 65; *Steud. Syn. Gram.* 331; *Miq. Fl. Ind. Bat.* iii. 423; *Munro in Trans. Linn. Soc.* xxvi. (1868) 132; *Kurz For. Fl. Burm.* ii. 569; *Gamble Bamb. Brit. Ind.* 119, t. 105. Bambusa baccifera, *Roxb. Corom. Pl.* iii. 38, t. 243, *Fl. Ind.* ii. 197. Beesha Rheedii, *Kunth in Journ. de Phys.* xlv. (1822) 4; *Revis. Gram.* i. 141; *Enum. Pl.* i. 434 (*excl. Syn.*). B. baccifera, *Schult. Syst.* vii. II. 1336. Nastus baccifera, *Roxb. ex Rasp. in Ann. Sc. Nat. Ser.* I. v. (1825) 442.

ASSAM, the KHASIA and GARROW HILLS, CHITTAGONG, ARRACAN, and TENASSERIM.

Evergreen. *Stems* solitary on branches of the rhizome, 50–70 ft. by $1\frac{1}{2}$–3 in. diam., green, straight, unbranched till near the top, nodes a thin ring; internodes

12–20 in., walls thin. *Stem-sheaths* 5–6 in. by 6–12 at the base, yellow, margins straight for ⅔ up, then waved, auricles often long-fringed; blade up to 1 ft., base 1 in. broad, decurrent in a narrow strip along the top of the sheath; ligule very narrow, serrate. *Leaves* from fascicled branches, tip long twisted scabrous, glaucescent beneath, young hairy, margins ciliate, inner and 2–3 adjoining nerves scabrous, midrib prominent, nerves 8–12 pairs, tessellate by pellucid glands; sheath glabrous, auricles pointed, ciliate and bearing 10–12 large whitish bristles; ligule very short. *Panicle* with drooping branches. *Spikelets* about ½ in., glabrous; empty gls. with sometimes abortive buds. *Lodicules* erose, 3–5-nerved. *Fruit* up to 3–5 by 2–3 in.

2. **M. humilis,** *Kurz For. Fl. Burm.* ii. 569; stem-sheaths very short glabrous? mouth much produced rounded inflated and sinuate, leaves 4–6 by ⅔–1 in. lanceolate to linear-lanceolate roughish puberulous beneath, base obtuse, petiole about ⅕ in., sheath glabrous mouth minutely auricled deciduously long-fringed. *Gamble Bamb. Brit. Ind.* 120, t. 106.

ARRACAN and PEGU, *Kurz.*

Known chiefly from the leaves and sheath. *Stems* 8–15 by 1 in. diam.; nodes hardly thickened, internodes about 1 ft. *Blade of stem-sheath* linear, erect, decurrent in a narrow nude green strip bordering the sinuses; ligule very narrow, entire.

146. **OCHLANDRA,** *Thwaites.*

Shrubby, gregarious, reed-like Bamboos. *Stems* erect, internodes rather long, thin-walled. *Stem-sheaths* thin, persistent, auricles small. *Leaves* as in *Bambusa*, margins cartilaginous, nerves many; sheath striate, fringed; ligule (except in one sp.) short. *Spikelets* fertile and sterile mixed, or whorled on terminal spikes or spicate panicles from a leafy branchlet, often very large, 1-fld.; empty gls. 2–5, usually mucronate; flg. gl. like the uppermost empty, mucronate; palea membranous, not or faintly 2-keeled. *Lodicules* 1 or more, usually appressed to the filaments. *Stamens* 6–120, filaments free or monadelphous, exserted; anthers long, narrow. *Ovary* narrow, style elongated, stigmas 3–6. *Fruit* large, ovoid, long-beaked, pericarp fleshy.—Species the following.

* *Stamens many, ligules short, filaments free.*

1. **O. Rheedii,** *Benth. ex Gamble Bamb. Brit. Ind.* 121, t. 107; leaves 4–10 by ½–1¼ in. linear-lanceolate, sheath smooth, auricles falcate fringed with bristles, spikelets cylindric acute glabrous, sterile ½–⅝ in., fertile 1–1¼ in., empty gls. 2–3 broadly ovate mucronate many-nerved, flg. gl. larger subacute, anthers mucronate. Beesha Rheedii, *Kunth Enum. Pl.* i. 434 (*excl. all cit. but Rheede*); *Rupr. Bamb.* 65; *Munro in Trans. Linn. Soc.* xxvi. (1868) 144; *Beddome Fl. Sylvat. Forest. Man.* p. ccxxxiv. Melocanna Rheedii, *Steud. Syn. Gram.* 332. Bambusa scriptoria, *Dennst. Schluess. Hort. Malab.* 31.—*Rheede Hort. Mal.* v. t. 60.

COCHIN and TRAVANCORE, *White, Johnstone, &c.*

Stems erect, up to 16 ft. by 1 in. diam.; nodes somewhat raised; internodes about 17 in., walls ⅕ in. thick. *Stem-sheaths* 4–6 in., purplish-green, young hairy, margins ciliate, top rounded-truncate, auricles falcate long-ciliate; blade subulate, base hairy within; ligule short, ciliate. *Leaves* usually small, base rounded, smooth on both surfaces, midrib narrow, nerves 5–10 pairs. *Spikes* or spicate *panicles* terminal or axillary on leafy branchlets. *Palea* convolute, long-mucronate, base membranous. *Lodicules* many, ⅓–½ in., acute, glabrous, 1–7-nerved. *Stamens* 15–18. *Ovary* oblong, style embraced by the enlarged perigynium, stigmas 3, plumose. *Fruit* oblong, long-beaked.

Var. *sivagiriana*, Gamble l. c. 122, t. 108; spikelets rather larger, stamens up to 60, leaves generally larger.—Pulney and Sivagiri Hills, *Beddome.*

2. **O. stridula,** *Thw. Enum. Pl. Zeyl.* 376; leaves 8–12 by 1½–2½ in. oblong-lanceolate, young sheath hirsute, auricles falcate fringed with bristles, spikelets 1 in. cylindro-conical sparsely hairy, empty gls. 2–3 convolute mucronate ciliate, flg. gl. larger, anther tips 2-fid and mucronate. *Trimen Cat. Ceyl. Pl.* 110; *Gamble Bamb. Brit. Ind.* 123, t. 109. Beesha stridula, *Munro in Trans. Linn. Soc.* xxvi. (1868) 145; *Beddome Fl. Sylvat. Forest. Man.* p. ccxxxiv. Bambusa stridula, *Moon Cat. Ceyl. Pl.* 26.

CEYLON; in the southern parts of the Island, *Thwaites.*

Stems 6–18 ft. by ½–⅔ in. diam., tufted, light green, geniculate, nodes ringed; internodes 12–14 in., scabrous. *Stem-sheaths* persistent, cylindric, glabrous, young purple, tip rounded with falcate small fringed auricles; blade subulate. *Leaves* broad, somewhat rough beneath, base rounded, petiole broad, midrib slender, nerves 10–12 pairs, tessellate by pellucid glands. *Spikelets* in a terminal panicle, whorled, few fertile, rachis of spike long, rough, glaucous. *Lodicules* 6–12 or more, lanceolate, 1- many-nerved, convolute. *Stamens* up to 30, filaments free, flat. *Ovary* narrow, beak trigonous; stigmas 4–5, plumose, at first twisted. *Fruit* 1 in., ovoid, beak 1 in.

Var. *maculata*, Gamble l. c. 124; stem greyish-green mottled with dark purplish blotches. Teinostachyum? maculatum, *Trim. in Journ. Bot.* xxiii. (1885) 273, *Cat. Ceyl. Pl.* 110.—Ceylon, *Ferguson.*

3. **O. Beddomei,** *Gamble Bamb. Brit. Ind.* 124, t. 110; leaves 6–8 by 1–1½ in. oblong-lanceolate margins revolute, auricles decurrent fringed with bristles, spikelets 1–1½ in. hirsute, empty gls. 2 ovate long-mucronate many-nerved, flg. gl. 1⅓ in. ovate-lanceolate mucronate many-nerved glabrous, anther tips 2-fid and mucronate.

NILGHIRI HILLS; in the Wynaad district, *Beddome.*

Leaves long-acuminate, base unequally rounded, subglaucous beneath, midrib slender, nerves about 8 pairs; sheaths puberulous, margins ciliate, callus narrow. *Panicle* short, spicate, terminating a leafy branchlet; rachis stiff, puberulous. *Spikelets* few together, cylindric-conical, 2-3-bracteate, hairs tuberous-based, brown, spreading; palea 1 in., membranous, acute or obtuse. *Lodicules* 5, all different, 3–7-nerved, entire or 2-fid. *Stamens* about 32. *Ovary* subglobose, beak embracing the style, stigmas 5–6 plumose.

** *Stamens many, ligule short, filaments coherent.*

4. **O. travancorica,** *Benth. ex Gamble Bamb. Brit. Ind.* 125, t. 111; leaves 6–18 by 2–4½ in. broadly oblong-lanceolate, auricles short falcate spikelets 2–2½ in. ovoid or ovoid-oblong, glabrous, empty gls. usually 3, lowest truncate tip subulate upper 2 in. long-acuminate, flg. gl. like the upper empty, anther-tips penicillate. *Gamble Bamb. Brit. Ind.* 125, t. 111. Beesha travancorica, *Beddome Fl. Sylvat.* t. cccxxiv. *Forest. Man.* p. ccxxxiv.

TRAVANCORE and TINNEVELLY, alt. 2–5000 ft., *Beddome*, &c. (monopolizing miles of country).

An erect gregarious reed-like bamboo. *Stems* 6–20 ft. by 1–2 in. diam., nodes swollen and scarred; internodes 1½–5 ft., rough; walls very thin. *Stem-sheaths* 6–8 in., thin, vertically wrinkled, young strigose with tuberous-based hairs, tip truncately rounded, fringed with bristles; blade subulate. *Leaves* glabrous or scaberulous, base rounded, petiole broad, midrib thick below, nerves 12–17 pairs, tessellate by pellucid glands; sheath glabrous, keeled, margins ciliate, callus shining; ligule short, truncate. *Spikelets* a few fertile and a few much smaller sterile together in the axils of ovate-lanceolate smooth bracts with subulate deciduous tips; single spikelets with 2–4 small sheathing bracts; gls. all many-nerved; palea acute, faintly 2-keeled. *Lodicules* 3, $\frac{1}{3}$ in., membranous, 3-7-nerved. *Stamens* up to 120, filaments coherent. *Ovary* narrow, tip 4-angled, stigmas 5–6 plumose spirally twisted together. *Fruit* 2 in. by $\frac{1}{2}$ in. diam., ovoid-oblong, beak 2 in., pericarp fleshy.

Var. *hirsuta*, Gamble l. c. 126, t. 112; spikelets densely brown velvety, leaves thicker, margins more cartilaginous, leaf-sheaths with appressed tuberous-based hairs. —Travancore Hills, *Beddome.*

*** *Stamens many, ligule* 1 *in. or more, filaments free.*

5. **O. Brandisii,** *Gamble Bamb. Brit. Ind.* 126, t. 113; leaves 10–20 by 1$\frac{1}{2}$–3 in. oblong-lanceolate acuminate, auricles short fringed, spikelets 1–1$\frac{1}{2}$ in. conical glabrous bracteolate with chaffy scales, gls. all many-nerved, 3–4 lower empty thick ovate truncate tip subulate, upper thinner, flg. gl. membranous, anthers long-apiculate. Bambusa Wightii, *Munro in Trans. Linn. Soc.* xxvi. (1868) 111.—*Wight Cat.* n. 1009.

TINNEVELLY GHATS; at Courtallam, *Wight, Brandis.*

Leaves thick, base narrowed, glabrous on both surfaces, whitish beneath, petiole short broad wrinkled beneath, midrib stout, nerves 10–13 pairs strong, tessellate by pellucid glands; sheath striate, callus smooth rounded. *Spike* terminal, rachis thick, whorls of spikelets several in the axils of ovate glabrous bracts; palea like the flg. gl. but smaller. *Lodicule* solitary, $\frac{1}{2}$–$\frac{6}{10}$ in.; many-nerved, truncate and retuse. *Stamens* up to 60. *Ovary* glabrous, stigmas 5, plumose.

**** *Stamens* 6 *or fewer, unequal, filaments free or coherent, ligule short.*

6. **O. Ridleyi,** *Gamble Bamb. Brit. Ind.* 127, t. 114; leaves 9–10 by 1–1$\frac{1}{2}$ in. oblong-lanceolate cuspidately acuminate, auricles rounded or falcate long-ciliate, spikelets about 1 in. appressedly hairy, empty gls. 1–2 ovate truncate long mucronate, flg. gls. 1–2 longer, rachilla produced beyond the upper, paleæ 2 not keeled.

SINGAPORE, *Ridley & Feilding.*

Leaves smooth above except the marginal nerves, scaberulous beneath, base rounded, petiole short broad, midrib slender, nerves 10–12 pairs; sheath short, smooth, striate, callus narrow. *Spike* or spicate *panicle* 3–4 in., terminating a leafy branchlet; heads subdistichous, bracteate; bracts with imperfect blades, ovate, truncate, fimbriate. *Spikelets* several sterile, few fertile; outer palea narrow, convolute, bimucronate, tip hairy, inner shorter tip rounded glabrous. *Lodicules* 6–10, many-nerved, entire or forked. *Stamens* 6, 3 longer obtuse, 3 shorter acute. *Ovary* linear; style long embraced by the enlarged perigynium, stigma plumose.

Flowers unknown.

7. **O. setigera,** *Gamble Bamb. Brit. Ind.* 128, t. 115; stem-sheaths papery sparsely strigose narrowed to a truncate top, blade subulate hair-like, leaves 6–9 by $\frac{3}{4}$–1$\frac{1}{4}$ in. oblanceolate acuminate puberulous beneath, sheath smooth, auricles decurrent, ligule very narrow erose.

NILGHIRI HILLS; ravines above Gudalur, alt. about 3000 ft., *Gamble.*

A small tufted erect or straggling reed-like Bamboo. *Stem* 20 ft. by $\frac{1}{2}$–$\frac{2}{3}$ in. diam., naked below, nodes hardly swollen; internodes 10–12 in., very smooth, walls $\frac{1}{10}$–$\frac{1}{5}$ in. thick. *Stem-sheaths* 6–7 in., persistent tessellately wrinkled towards the top, blade $\frac{2}{3}$–1 in., hairy within, margins incurved, top very narrow; blade $\frac{3}{4}$–1 in., hairy within, margin incurved. *Leaves* smooth above, puberulous beneath, tip capillary, midrib narrow, nerves 6–7 pairs, tessellate by pellucid glands; auricles of sheath fringed with long curved bristles.

ADDITIONS AND CORRECTIONS TO VOL. VII.

p. 4. After 41. ARTHRAXON, insert:
Spikes solitary, rachis flattened, spikelets of each
pair both 2-fld. and bisexual . . . 41^1. ISCHNOCHLOA.

p. 5. After 52. GERMAINIA, insert:
Spike solitary, joints clavate hollow, spikelets
secund 2-nate lower 1-fld., upper neuter . 52^1. COELARTHRON.

„ After 55. ISEILEMA, insert:
Spikelets as in *Anthistiria* but lower in spike not
whorled and neuter . . . . . . 55^1. PSEUDANTHISTIRIA.

„ For Subtribe VI. read Tribe VI.

„ 66. PHIPPSIA, see *Catabrosa himalaica*, p. 311.

p. 6. After 67. CYATHOPUS, insert:
Spikelets compressed, fls. diandrous, gls. 1-nerved,
III 2-lobed awned in the sinus . . . 67^1. WOODROVIA.

„ Subtribes *Aireæ* and *Euaveneæ* are distinguished from one another by the very inconstant characters of the rachilla, which in *Aira caryophyllea* is produced with a minute seta beyond the fl. gl.

„ After 83. DANTHONIA, insert:
Spikelets of *Danthonia*, but lodicules 0, style
single very long . . . . . . 83^1. DUTHIEA.

p. 7. After 97. PHRAGMITIS, insert:
Rachilla elongate bearded, lateral nerves only
of flg. gls. with long silky hairs . . . 97^1. NEYRAUDIA.

„ 103. CATABROSA. This genus includes 66. PHIPPSIA and 119. COLPODIUM, the position of which latter it should occupy on p. 8.

p. 8. The characters of 105. MYRIOSTACHYS and 106. HALOPYRUM are partly transposed and erroneous; read:
Infl. pyramidal dense-fld., empty gls. long-
awned, grain ovoid . . . . . . 105. MYRIOSTACHYS.
Infl. a lax panicle, empty gls. not awned, I 3-
nerved, grain broad deeply concave ventrally 106. HALOPYRUM.

„ Dele 107. COELACHYRUM (see p. 328).

„ 119. COLPODIUM, see p. 311 under CATABROSA.

„ For DUTHIÆA read DUTHIEA, and transfer to p. 6 after 83. DANTHONIA.

p. 9. After ELYMUS, insert:
Spikelets 2- or more-fld., empty gls. 0 or minute 131^1. ASPERELLA.

„ 135. For THYRSACANTHUS, read THYRSOSTACHYS.

p. 99. In character of *Zoysia*, line 5, dele " nerveless "; line 6, the palea is not always nerveless.

p. 100. Under COIX LACHRYMA-JOBI, var. *stenocarpa*, after Stapf. insert: "*in Hook. Ic. Pl. t.* 1764, *in Kew Bulletin* (1888) 144."

„ Under var. *Ma-yuen*, insert as synonym, C. gigantea, *Kew Bulletin* (1893) 76.

p. 167. Under habitats for *A. fastigiatus*, for Berar, read Behar.

p. 186. For Subgen. VI., read Subgen. VII.

p. 187. „ VII., „ VIII.

p. 203, line 8 from bottom, for criophorus, read eriophorus.

p. 272. In generic character of *Aira*, the rachilla is described as not produced beyond gl. IV, but it is so in *A. caryophyllea* as a very minute setiform process.

p. 282. For 84. DUTHIÆA, read 83^1. DUTHIEA.

p. 311, line 8 from top, for $\frac{1}{3}$, read $\frac{1}{30}$.

„ „ 14 „ for *augusta*, read *angusta*.

p. 312, line 9 from top, for Graphaphorum, read Graphephorum.

„ „ 13, dele sheaths of innovations . . . to mouth.

„ Under 6. *C. Wallichii*, for $\frac{1}{10}$, read $\frac{1}{7}$.

p. 357, line 6, Festuca filiformis, *Nees*, is correctly referred to Tripogon abyssinicus at p. 287.

GENERAL INDEX.

GENERAL INDEX.*

Orders, suborders, tribes and sections in capital type; genera and species in roman type; synonyms and species incidentally mentioned in italic type.

Vol. Page
Abatua, vide *Abutua* ... v. 643
Abelia, *Br.* ... iii. 9
  triflora, *Br.* ... ,, 9
Abelmoschus angulosus, W. & A. i. 341
  crinitus, Wall. ... ,, 342
  esculentus, W. & A. ... ,, 343
  ficulneus, W. & A. ... ,, 340
  moschatus, Mœnch ... ,, 342
  racemosus, Wall. ... ,, 342
  rugosus, W. & A. ... ,, 342
  tetraphyllus, Grah. ... ,, 341
  warreensis, Dalz. ... ,, 341
Aberia, *Hochst.* ... i. 195
  Gardneri, *Clos.* ... ,, 195
Abies, *Juss.* ... v. 654
  Brunoniana, Lindl. ... ,, 654
  Dammara, Poir. ... ,, 650
  densa, Griff. ... ,, 654
  Deodara, Lindl. ... ,, 653
  dumosa, Loud. ... ,, 654
  Griffithiana, Lindl. & Gord. ,, 655
  Pindrow, Spach ... ,, 655
  Smithiana, Forbes ... ,, 653
  spectabilis, Spach ... ,, 654
  spinulosa, Griff. ... ,, 653
  Webbiana, *Lindl.* ... ,, 654
ABIETINEÆ ... v. 644
Abildgaardia, Vahl ... vi. 649
  cinnamometorum, Thw. ... ,, 650
  compressa, Presl ... ,, 649
  cyperoides, Nees ... ,, 650
  Eragrostis, Boeck. ... ,, 648
  fulvescens, Thw. ... ,, 650
  fusca, Nees ... ,, 649
  indica, Nees ... ,, 649
  lævigata, Link ... ,, 649
  monostachya, Vahl ... ,, 649
  nervosa, Presl ... ,, 634
  pauciflora, Kunth ... ,, 649
  Rottboelliana, Nees ... ,, 649
  tristachya, Vahl ... ,, 649
  sp., Wall. ... ,, 649

Vol. Page
Abroma, *Jacq.* ... i. 375
  angulata, Lamk. ... ,, 375
  augusta, *Linn.* ... ,, 375
  fastuosa, Gærtn. ... ,, 375
  Wheleri (*Wheeleri*), Retz. ,, 375
ABRUS, *Linn.* ... ii. 175
  acutifolius, Bl. ... ,, 175
  fruticulosus, *Wall.* ... ,, 176
  lævigatus, E. Meyer ... ,, 175
  melanospermus, Hassk. ... ,, 175
  minor, Desv. ... ,, 175
  pauciflorus, Desv. ... ,, 175
  precatorius, *Linn.* ... ,, 175
  pulchellus, *Wall.* ... ,, 175
Absinthium vulgare, Gærtn. iii. 328
Abutilon, *Gærtn.* ... i. 325
  albidum, Webb & Berth. ,, 328
  asiaticum, *G. Don* ... ,, 326
  asiaticum, W. & A. ... ,, 326
  auritum, Wall. ... ,, 328
  Avicennæ, *Gærtn.* ... ,, 327
  bidentatum, *Hochst.* ... ,, 326
  crispum, G. *Don* ... ,, 327
  fruticosum, *Guill. & Perr.* ,, 328
  glaucum, G. Don ... ,, 327
  graveolens, *W. & A.* ... ,, 327
  hirtum, G. Don... ... ,, 327
  hirtum, W. & A. ... ,, 327
  indicum, *G. Don* ... ,, 326
  Leschenaultianum, G. Don ,, 325
  microphyllum, A. Rich ... ,, 328
  muticum, *G. Don* ... ,, 327
  neilgherrense, *Munro* ... ,, 328
  periplocifolium, G. Don ... ,, 325
  polyandrum (*Schlecht*), G. Don ... ,, 325
  populifolium, G. Don ... ,, 326
  ramosum, *Guill. & Perr.* ,, 328
  sidoides, Dalz. & Gibs. ... ,, 328
  tomentosum, W. & A. ... ,, 327
Abutua (*Abatua*) *indica*, Lour. v. 643
Acacia, *Willd.* ... ii. 292

---

* The contents of this Index have been collated with the Index Kewensis.

Acacia	Vol.	Page
alba, Willd.	ii.	294
alliacea, Ham.	„	297
amara, Willd.	„	301
amblycarpa, Grah.	„	298
arabica, *Willd.*	„	293
Arar, Ham.	„	297
arcuata, Dcne.	„	294
Arrophula, D. Don	„	298
biceps, DC.	„	290
cæsia, W. & A.	„	297
cæsia, Wall.	„	298
Campbelli, Arn.	„	293
canescens, Grah.	„	298
Caringa, Ham.	„	290
Catechu, *Willd.*	„	295
Catechu, Brand.	„	295
Catechu, W. & A.	„	294
catechuoides, Wall.	„	295
chrysocoma, Miq.	„	294
Chundra, Willd.	„	295
cinerea, Spreng.	„	288
concinna, *DC.*	„	296
concinna, Wall.	„	298
Dalea, Desv.	„	288
dealbata, Link	„	292
densa, Wall.	„	294
dumosa, W. & A.	„	296
eburnea, *Willd.*	„	293
elata, Grah.	„	299
Farnesiana, *Willd.*	„	292
Farnesiana, Wall.	„	293
ferruginea, *DC.*	„	295
foliolosa, Grah.	„	301
frondosa, Willd.	„	290
glauca, DC.	„	290
Hooperiana, Zippel	„	296
indica, Desv.	„	292
Intsia, *Willd.*	„	297
intsioides, DC.	„	297
Jacquemontii, *Benth.* ...	„	293
Julibrissin, Willd.	„	300
Latronum, *Willd.*	„	296
Lebbek, Willd.	„	298
lenticularis, *Ham.*	„	296
leucocepala, DC.	„	290
leucophlæa, *Willd.*	„	294
lomatocarpa, DC.	„	299
marginata, Ham.	„	300
megaladena, Desv.	„	297
melanoxylon, Br.	„	292
microcephala, Grah.	„	294
modesta, *Wall.*	„	296
mollis, Wall.	„	300
myriophylla, Grah.	„	301
Nellyrenza, Grah.	„	301
Nemu, Willd.	„	300
nitida, Willd.	„	303
Acacia	Vol.	Page
odoratissima, Willd. ...	ii.	299
oxyphylla, Grah.	„	297
paludosa, Miq.	„	297
pennata, *Willd.*	„	297
pinnata, Dalz. & Gibs. ...	„	297
planifrons, *W. & A.* ...	„	293
pluricapitata, Steud. ...	„	298
polyacantha, Willd.	„	295
polycephala, Grah.	„	298
prensans, Lowe	„	297
procera, Willd.	„	299
Pseudo-intsia, Miq.	„	297
Roxburghii, W. & A. ...	„	293
rugata, Ham.	„	297
rupestris, Stocks	„	295
Senegal, *Willd.*	„	295
Sirissa, Ham.	„	298
speciosa, Willd.	„	298
Smithiana, Wall.	„	300
stipulata, DC.	„	300
Suma, *Kurz*	„	294
Sundra, *DC.*	„	295
Sundra, Wall.	„	294
tomentella, Zipp.	„	298
tomentosa, *Willd.*	„	294
umbraculata, Wall.	„	296
vera, Willd.	„	293
Verek, Guill. & Perr. ...	„	295
Wallichiana, DC.	„	295
Wightii, Baker	„	298
ACACIEÆ	ii.	61
Acalypha, *Linn.*	v.	414
albicans, Heyne	„	417
alnifolia, *Klein*	„	415
amentacea, Roxb.	„	415
atropurpurea, Wall. ...	„	397
betulina, Retz.	„	415
boehmerioides, Miq.	„	417
brachystachya, *Hornem*	„	416
calyciformis, Wight	„	416
canescens, Wall.	„	416
capitata, Wall.	„	415
capitata, Willd.	„	415
ciliata, *Forsk.*	„	417
ciliata, Heyne	„	417
ciliata, Wall.	„	416
collina, Heyne	„	417
conferta, Roxb.	„	416
corchorifolia, Vahl	„	417
cylindrica, Roxb.	„	417
Dalzellii, *Hk. f.*	„	414
fallax, *Muell.*	„	416
filiformis, Heyne	„	415
fimbriata, Schum.	„	417
fissa, Hb. Madr.	„	416
flexuosa, Wight...	„	417
floribunda, Heyne	„	417

Acalypha Vol. Page
fruticosa, *Forsk.* v. 415
hispida, Burm. „ 417
hispida, Heyne „ 416
hispida, Wight „ 417
indica, *Linn.* „ 416
lanceolata, Heyne „ 417
lanceolata, Willd. „ 417
malabarica, *Muell.* „ 416
paniculata, *Miq.* „ 415
Poiretii, Spreng. „ 417
racemosa, Heyne „ 415
rubra, Wight „ 417
spicata, Forsk. „ 416
villosa, Heyne „ 417
virginiana, Russell „ 417
Wallichiana, Thw. „ 415
Wightiana, Muell. „ 417
Acampe, Lindl. vi. 54, 179
Cephalotes, Lindl. vi. 63
congesta, Lindl. „ 63
dentata, Lindl. „ 62, 66
excavata, Lindl. „ 63
Griffithii, Rchb. f. „ 66
intermedia, Rchb. f. „ 66
? *longifolia*, Lindl. „ 62
? *multiflora*, Lindl. „ 62
papillosa, Lindl. „ 63
Wightiana, Lindl. „ 62
Acanthacea, Griff. iv. 428, 448, 459, 473, 495, 548
ACANTHACEÆ iv. 387
ACANTHEÆ iv. 389
Acanthephippium, *Bl.* v. 815
bicolor, *Lindl.* „ 815
ringiflorum, Griff. „ 815
striatum, *Lindl.* „ 816
sylhetense, *Lindl.* „ 815
Acanthodium grossum, Wight iv. 479
spicatum, Delile „ 479
Acantholimon, *Boiss.* iii. 479
lycopodioides, *Boiss.* „ 479
tibeticum, Hk. f. & T. „ 479
Acanthopanax, *Dcne. & Planch.* ii. 726
aculeatum, *Seem.* „ 726
sepium, Seem. „ 726
Acanthophyllum, *C. A. Mey.* i. 216
macrodon, *Edgew.* „ 216
Acanthus, *Linn.* iv. 480
carduaceus, *Griff.* „ 480
ciliaris, Burm. „ 479
Delilei, Spreng. „ 479
Doloarius, Blanco „ 481
ebracteatus, *Vahl* „ 481
edulis, Forsk. „ 479
ilicifolius, *Linn.* „ 481
ilicifolius, Lour. „ 481

Acanthus Vol. Page
leucostachyus, *Wall.* iv. 480
longibracteatus, *Kurz* „ 482
longipetiolatus, *Kurz* „ 480
maderaspatensis, Linn. „ 479
mucronatus, Heyne „ 517
repens, Vahl „ 479
volubilis, *Wall.* „ 481
Accras, vide *Aceras.*
Acer, *Tournef.* i. 692
acuminatum, Wall. „ 695
Buzimpala, Ham. „ 693
cæsium, *Wall.* „ 695
Campbellii, *Hk. f. & T.* „ 696
caudatum, *Wall.* „ 695
colchicum, Hort. „ 696
cultratum, Wall. „ 696
Hookeri, *Miq.* „ 694
isolobum, *Kurz* „ 694
javanicum, *Jungh.* „ 693
lætum, C. A. Mey. „ 696
lævigatum, Wall. „ 693
laurifolium, D. Don „ 693
laurinum, Hassk. „ 693
Mono, Maxim. „ 696
niveum, *Bl.* „ 693
oblongum, *Wall.* „ 693
pectinatum, Wall. „ 695
pentapomicum, *J. L. Stew.* „ 694
pictum, *Thunb.* „ 696
platanifolium, Griff. „ 695
sikkimense, *Miq.* „ 694
stachyophyllum, *Hiern* „ 694
sterculiaceum, Griff. „ 696
sterculiaceum, Wall. „ 695
Thomsoni, Miq. „ 695
truncatum, Bunge „ 696
villosum, *Wall.* „ 695
Aceras (*Accras*) *angustifolia*, Lindl. vi. 129
longicruris, Wright *lapsu*, H. „ 129
ACERINEÆ i. 669
Achasma, Griff. vi. 234
macrocheilos, Griff. „ 235
megalocheilos, Griff. „ 236
metriocheilos, Griff. „ 234
Achillea, *Linn.* iii. 311
cuspidata, DC. „ 312
millefolium, *Linn.* „ 312
squarrosa, Ait. „ 312
Achimenes sesamoides, Vahl iv. 274
Achnodon arenarius, Link vii. 237
Achnodonton arenarium, Trin. vii. 237
Achras elengoides, Bedd. iii. 538
Sapota, Linn. „ 534
tomentosa, Bedd. „ 538
Achymus pallens (*patens*), Soland. v. 489

Vol. Page
Achyranthes, *Linn.* ... ... iv. 729
alopecuroides, Lamk. ... „ 727
alternifolia, Linn. ... ... „ 718
aquatica, *Br.* ... ... „ 730
?*argentea*, Thw. ... ... „ 730
aspera, *Linn.* ... ... „ 730
aspera, Wall. ... ... „ 731
atropurpurea, Lamk. ... „ 723
bengalensis, Lamk. ... ... „ 731
bidentata, *Bl.* ... ... „ 730
brachiata, Linn. ... ... „ 726
calceolata, Hb. Russel ... „ 725
? *carnosa*, Wall. ... ... „ 725
corymbosa, Linn. ... ... i. 245
debilis, Poir. ... ... iv. 723
diandra, *Roxb.* ... ... „ 731
Digera, Poir ... ... „ 718
echinata, Retz. ... ... „ 724
echinata, Willd. ... ... „ 724
ferruginea, Roxb. ... ... „ 725
javanica, Pers. ... ... „ 727
glauca, Hb. Heyne ... ... „ 725
incana, Roxb. ... ... „ 727
lanata, Linn. ... ... „ 728
lanceolata, Wall. ... ... „ 731
lappacea, Linn. ... iv. 723, 724
lappacea, Willd. ... ... iv. 724
Monsonia, Pers. ... ... „ 729
montana, Klein ... ... „ 725
Moorcroftiana, Br. ... ... v. 8
muricata, Willd. ... ... iv. 718
natans, Ham. ... ... „ 730
nervosa, Roth ... ... „ 729
nodiflora, Roxb. ... ... „ 717
nuda, Hb. Heyne ... ... „ 725
orbiculata, Heyne ... ... „ 724
papposa, Jacq. ... ... v. 8
patula, Linn. ... ... iv. 724
patula, Willd. ... ... „ 724
polygonata, Heyne ... ... „ 716
polygonoides, Retz. ... ... „ 718
porphyristachya, Wall. ... „ 730
prostrata, Linn. ... ... „ 723
pubescens, Roth ... ... „ 729
pungens, Lamk. ... ... „ 729
radicans, Heyne ... ... „ 729
repens, Heyne ... ... „ 723
rotundifolia, Klein ... ... „ 724
rubro-fusca, Wight ... ... „ 730
sarmentosa, Vahl .. ... „ 731
scandens, Roxb. ... ... „ 727
Sequax, Wall. ... ... „ 722
sericea, Koen. ... ... „ 726
setacea, Roth ... ... „ 729
styracifolia, Lamk. ... ... „ 724
thyrsiflora, Heyne ... ... „ 716
tomentosa, Roth ... ... „ 722
Achyranthes
triandra, Roxb. ... ... iv. 731
trichotoma, Perrott. ... „ 730
villosa, Forsk. ... ... „ 728
Wightiana, Wall. ... ... „ 731
Achyrospermum, *Bl.* ... ... iv. 673
densiflorum, Bl.... ... ... „ 673
philippinense, Benth. ... „ 673
Wallichianum, *Benth.* ... „ 673
Acianthus petiolatus, D. Don v. 693
Acilepis lanata, Spreng. ... iii. 387
squarrosa, D. Don ... ... „ 230
Aclisia elegans, Hassk. ... vi. 368
gigantea, Hassk. ... ... „ 368
indica, Wight ... ... „ 368
sorzogonensis, E. Meyer ... „ 367
? *Thomsoni*, Clarke ... ... „ 376
umbellata, Clarke ... ... „ 368
sp. Hk. f. & T. ... ... iii. 367, 368
Acmella biflora, Spreng. ... iii. 306
Linnæa, Cass. ... ... „ 307
Acmena lanceolata, Thw. ... ii. 485
parviflora, DC. ... ... „ 485
zeylanica, Thwaites ... „ 485
Aconitum, *Linn.* ... ... i. 27
Atees, Royle ... ... „ 29
cordatum, Royle ... ... „ 29
delphinifolium ... ... „ 29
dissectum, D. Don ... ... „ 29
ferox, *Wall.* ... ... „ 28
ferox, Wall. ... ... „ 29
heterophyllum, *Wall.* ... „ 29
læve, Royle ... ... „ 28
lethale, Griff. ... ... „ 28
luridum, *Hk. f. & T.* ... „ 28
Lycoctonum, *Linn.* ... „ 28
multifidum, Royle ... ... „ 29
Napellus, *Linn.* ... ... „ 28
oliganthemum, Kerner ... „ 29
palmatum, *D. Don* ... ... „ 28
rotundifolium, Kar. & Kir. „ 29
tianschanicum, Osk. & Rupr. „ 29
uncinatum, *Linn.* ... ... „ 28
variegatum, Hk. f. & T. ... „ 28
virosum, D. Don ... ... „ 28
Acorus, *Linn.* ... ... vi. 555
Belangeri, Schott. ... ... „ 555
Calamus, *Linn.* ... ... „ 555
Calamus, Benth. ... ... „ 556
Casia, Bertol. ... ... „ 555
gramineus, *Soland* ... ... „ 556
Griffithii, Schott. ... ... „ 555
nilaghirensis, Schott ... „ 555
Tatarinovii, Schott... ... „ 556
terrestris, Spreng. ... ... „ 556
Acosmia rupestris, Benth. ... i. 217
Acranthera, *Arn.* ... ... iii. 92
anamallica, *Bedd.* ... ... „ 93

Acranthera Vol. Page
grandiflora, *Bedd.* ... ... iii. 93
Griffithii, *Hk. f.* ... ... „ 92
Maingayi, *Hk. f.* ... ... „ 92
tomentosa, *Hk. f.* ... ... „ 92
uniflora, Kurz ... ... „ 86
zeylanica, *Arn.* ... ... „ 92
Acratherum fuscatum, Nees vii. 74
miliaceum, Link ... ... „ 73
pumilum, Hochst. ... ... „ 71
ACRIDOSTACHYA, Hk. f. ... v. 786
Acriopsis, *Reinwdt.* ... ... vi. 79
crispa, Griff. ... ... „ 79
Griffithii, Rchb. f. ... ... „ 79
indica, *Wight* ... ... „ 79
javanica, *Reinwdt.* ... ... „ 79
picta, Lindl. ... ... „ 79
Ridleyi, *Hk. f.* ... ... „ 79
Acrocarpus, *W. & A.* ... ... ii. 292
combretiflorus, Teysm. & Binn. ... ... „ 292
fraxinifolius, *Wight* ... „ 292
Acrocephalus, *Benth.* ... ... iv. 611
axillaris, *Benth.* ... ... „ 612
Blumei, Benth. ... ... „ 611
capitatus, *Benth.* ... ... „ 611
scariosus, Wall. ... ... „ 611
Acrochæne, *Lindl.* ... ... v. 783
punctata, *Lindl.* ... ... „ 783
Acroelytrum japonicum, Steud. ... ... vii. 331
Acroglochin, *Schrad.* ... ... v. 2
chenopodioides, *Schr.* ... „ 2
persicarioides, Moq. ... ... „ 2
Schraderianus, Schult. ... „ 2
Acronema tenerum, Edgew. ii. 686
sp., Hk. f. & T. ... ... „ 686
Acronodia punctata, Bl. ... i. 408
Acronychia, *Forst.* ... ... i. 498
laurifolia, *Bl.* ... ... „ 498
pedunculata, Miq. ... ... „ 498
Porteri, *Hk. f.* ... ... „ 498
Acrotrema, *Jack.* ... ... i. 32
Arnottianum, *Wight* ... „ 32
bullatum, Thw. ... ... „ 33
costatum, *Jack* ... ... „ 32
costatum, Wall. ... ... „ 32
dissectum, *Thw.* ... ... „ 34
Gardneri, *Thw.* ... ... „ 33
intermedium, *Thw.* ... ... „ 33
lanceolatum, *Hook.* ... „ 33
lyratum, *Thw.* ... ... „ 34
sylvaticum, Thw. ... ... „ 33
Thwaitesii, *Hk. f. & T.* ... „ 34
uniflorum, *Hook.* ... ... „ 33
Walkeri, *Wight* ... ... „ 33
Wightianum, W. & A. ... „ 32
Wightianum, Wall. ... ... „ 32

Vol. Page
Actæa, *Linn.* ... ... i. 29
acuminata, Wall. ... ... „ 29
cimicifuga, Linn. ... ... „ 30
frigida, Wall. ... ... „ 30
spicata, *Linn.* ... ... „ 29
Actegeton sarmentosa, Bl. ... iii. 620
Actephila, *Blume* ... ... v. 282
bantamensis, Miq. ... ... „ 283
excelsa, *Muell.* ... ... v. 282, 283
javanica, *Miq.* ... ... v. 283
neilgherrensis, Thw. ... „ 283
neilgherrensis, Wight ... „ 282
puberula, *Kurz* ... ... „ 283
rectinervis, Kurz ... ... „ 473
Thomsoni, *Muell.* ... ... „ 283
zeylanica, *Muell.* ... ... „ 283
Actinia sp., Griff. ... ... v. 718
Actinidia, *Lindl.* ... ... i. 285
callosa, *Lindl.* ... ... „ 286
Kolomikta, Rupr. ... ... „ 286
strigosa, *Hk. f. & T.* ... „ 286
Actinocarya, *Benth.* ... ... iv. 154
tibetica, *Benth.* ... ... „ 155
Actinodaphne, *Nees* ... ... v. 147
ambigua, *Hk. f.* ... ... „ 153
angustifolia, *Nees* ... ... „ 152
angustifolia, Nees ?... ... „ 149
Blumii, Nees ... ... „ 160
campanulata, *Hk. f.* ... „ 148
Candolleana, Meissn. ... „ 153
concolor, *Nees* ... ... „ 148
confertiflora, *Meissn.* ... „ 154
elegans, *Thw.* ... ... „ 150
glauca, *Nees* ... ... „ 150
glauca, Thw. ... ... „ 151
? *heterophylla*, Bl. ... ... „ 152
hirsuta, *Hk. f.* ... ... „ 152
Hookeri, Bedd. ... ... „ 149
Hookeri, *Meissn.* ... ... „ 149
lanata, *Meissn.* ... ... „ 149
leiantha, Hk. f. ... ... v. 154, 910
leiophylla, *Hk. f.* ... ... v. 910
macroptera, Miq. ... ... „ 152
madraspatana, *Bedd.* ... „ 149
Maingayi, *Hk. f.* ... ... „ 151
malaccensis, *Hk. f.* ... ... „ 148
molochina, *Nees* ... ... „ 150
Moonii, Thw. ... ... „ 150
obovata, *Bl.* ... ... „ 153
pisifera, *Hk. f.* ... ... „ 151
pruinosa, *Nees* ... ... „ 152
reticulata, *Meissn.* ... ... „ 147
salicina, *Meissn.* ... ... „ 148
salicina, Bedd. ... ... „ 149
sesquipedalis, *Hk. f. & T.* „ 151
sikkimensis, *Meissn.* ... „ 147
speciosa, *Nees* ... ... „ 153

Actinodaphne Vol. Page
sphærocarpa, Nees ... ... v 154
stenophylla, *Thw.* ... ... „ 150
Thwaitesii, Meissn.... ... „ 150
Actinoschœnus filiformis, Benth. ... ... vi. 650
sp., Benth. ... ... „ 651
Actinostemma, *Griff.* ... ... ii. 632
tenerum, *Griff.*... ... ... „ 633
Adambea glabra, Lamk. ... ii. 577
Adamia chinensis, Gardn. & Champ. ... ... ii. 406
cyanea, Wall. ... ... „ 406
versicolor, Fortune ... ... „ 406
Adansonia, *Linn.*... ... ... i. 348
digitata, *Linn.*... ... ... „ 348
Adelia barbata, Blanco ... v. 430
Bernardia, Blanco ... ... „ 430
castanicarpa, Roxb.... . „ 460
cuneata, Wall.... ... ... „ 456
glandulosa, Blanco ... ... „ 422
neriifolia, Roth ... ... „ 455
retusa, Wight ... ... „ 456
Adelostemma, *Hk. f.* ... ... iv. 20
gracillimum, *Hk. f.* ... „ 21
Adenacanthus acuminatus, Nees ... ... iv. 431, 455
Adenanthera, *Linn.* ... ... ii. 287
aculeata, Roxb. ... ... „ 288
bicolor, *Moon* ... ... „ 287
pavonina, *Linn.* ... ... „ 287
Adenema hyssopifolium, G. Don ... ... iv. 101
Adenilema fallax, Bl., ii. Addend.
Adenocaulon, *Hook.* ... ... iii. 302
adhærescens, Max. ... ... „ 302
bicolor, *Hook.*... ... ... „ 302
himalaicum, Edgew. ... „ 302
Adenochlæna, *Baill.* ... ... v. 417
indica, *Bedd.* ... ... „ 418
leucocephala, *Baill.* ... „ 419
silhetiana, *Benth.* ... ... „ 418
zeylanica, *Thw.* ... ... „ 419
Adenocrepis lanceolata, Muell. ... ... v. 368
Adenolepis calva, Sch. Bip. iii. 310
? *Adenoncos virens*, Bl. ... vi. 77
Adenoon, *Dalz.* ... ... iii. 229
indicum, *Dalz.*... ... ... „ 229
Adenosacme, *Wall.* ... ... iii. 95
Lawii, *Hk. f.* ... ... „ 96
longifolia, *Wall.* ... ... „ 95
macrostachya, *Hk. f.* ... „ 96
malayana, Wall. ... ... „ 95
stipulata, *Hk. f.* ... ... „ 95
Adenosma, *Br.* ... ... iv. 263
camphoratum, *Hk. f.* ... „ 264
capitatum, *Benth.* ... ... „ 264
Adenosma Vol. Page
cœruleum, *Br.*... ... ... iv. 263
cuspidatum, Benth.... ... „ 262
macrophyllum, *Benth.* ... „ 264
malabaricum, *Hk. f.* ... „ 264
microcephalum, *Hk. f.* ... „ 264
ovatum, *Benth.* ... ... „ 263
subrepens, *Benth.* ... ... „ 263
triflorum, Seem. ... ... „ 266
villosum, Benth. ... ... „ 263
Adenosma, Nees ... ... „
affinis, Griff. ... ... „ 454
balsamea, Spreng. ... ... „ 404
biplicata, Nees... ... ... „ 405
elongata, Bl. ... ... „ 400
Griffithii, T. Anders. ... „ 404
lanceolata, Bl. ... ... „ 398
pinnatifidum, T. Anders. „ 405
polysperma, Spreng. ... „ 406
spatulata, Bl. ... ... „ 396
Thwaitesii, T. Anders. ... „ 405
Thymus, Nees ... ... „ 404
triflora, Nees ... ... „ 405
uliginosa, Nees... ... ... „ 403
verticillata, Nees ... ... „ 404
Adenostemma, *Forst.*... ... iii. 242
angustifolium, Arn.... ... „ 242
aquaticum, D. Don ... ... „ 242
elatum, DC. ... ... „ 242
erectum, DC. ... ... „ 243
fastigiatum, DC. ... ... „ 243
fastigiatum, Sch. Bip. ... „ 243
glandulosum, Benth. *vide* Odontostemma ... ... i. 242
latifolium, DC.... ... ... iii. 242
latifolium, Wight ... ... „ 243
leiocarpum, DC. ... iii. 242, 243
macrophyllum, DC.... ... iii. 242
madurense, DC. ... ... „ 243
microcephalum, DC. ... „ 242
parviflorum, DC. ... ... „ 242
reticulatum, DC. ... ... „ 243
rivale, Dalz. ... ... „ 242
Roylei, DC. ... ... „ 242
rugosum, DC. ... ... „ 243
viscosum, *Forst.* ... ... , 242
viscosum, DC. ... ... „ 243
Adenostylis emarginata, Bl. vi. 107
integerrima, Bl. ... ... „ 107
Adhatoda, *Nees* ... ... iv. 540
arenaria, Nees ... ... „ 526
argyrostachya, Nees... ... „ 527
Beddomei, *Clarke* ... ... „ 540
Betonica, Nees ... ... „ 525
ceylanica, Nees... ... ... „ 529
decussata, Nees ... ... „ 532
diversiformis, Nees ... ... „ 529
Hookeriana, Nees ... ... „ 532

Adhatoda Vol. Page
Neesiana, Nees... ... ... iv. 531
nilgherrensis, Nees ... ... „ 526
nilgherrica, Nees ... ... „ 526
orixensis, Nees ... ... „ 529
quadrifaria, Nees ... ... „ 530
ramosissima, Nees ... ... „ 525
sisparensis, Benth. ... ... „ 546
tranquebariensis, Nees ... „ 530
trinervia, Nees ... ... „ 526
vasculosa, Nees... ... ... „ 533
Vasica, *Nees* ... ... „ 540
ventricosa, Nees ... ... „ 526
wynaadensis, Nees ... ... „ 533
Zollingeriana, Nees ... ... „ 530
sp., Griff. ... ... „ 540
sp., Hk. f. & T. ... iv. 531, 533, 542
Adina, *Salisb.* ... ... iii. 24
cordifolia, *Hk. f.* ... ... „ 24
Griffithii, *Hk. f.* ... ... „ 24
polycephala, *Benth.*... ... „ 25
sessilifolia, *Hk. f.* ... ... „ 24
Adinandra, *Jack* ... ... i. 281
acuminata, *Korth.* ... ... „ 282
crenulata, *T. Anders* ... „ 283
cyrtopoda, Miq.... ... ... „ 282
dasyantha, Chois. ... ... „ 282
dumosa, *Jack* ... ... „ 282
glabra, Miq. ... ... „ 282
Griffithii, *Dyer* ... ... „ 282
integerrima, *T. Anders.* ... „ 282
Jackiana, Korth. ... ... „ 282
lasiopetala, *Chois.* ... ... „ 283
maculosa, *T. Anders* ... „ 282
stylosa, Miq. ... ... „ 282
trichocoryna, Korth. ... „ 282
villosa, *Chois.* ... ... „ 283
Adisca floribunda, Bl.... ... v. 432
subpeltata, Bl. ... ... „ 433
Zippelii, Bl. ... ... „ 430
Adonis, *Linn.* ... ... i. 15
æstivalis, *Linn.* ... ... „ 15
autumnalis ... ... „ 15
chrysocyathus, *Hk. f. & T.* „ 15
Inglisii, Royle ... ... „ 15
marginata, Bienert ... ... „ 15
pyrenaica, Hk. f. & T. ... „ 15
scrobiculata, *Boiss.* ... ... „ 15
Adoxa, *Linn.* ... ... iii. 1
inodora, Falc. ... ... „ 2
moschatellina, *Linn.* ... „ 2
Æceoceadus, *vide Œceoclades* vi. 37
Æchmandra conocarpa, Dalz. & Gibs. ... ... ii. 628
deltoidea, Arn.... ... ... „ 626
epigæa, Arn. ... ... „ 628
indica, Arn. ... ... „ 626
rostrata, Arn. ... ... „ 627
Æchmandra Vol. Page
velutina, Dalz. & Gibs. ... ii. 628
zeylanica, Thw. ... ... „ 629
Æchmanthera, *Nees* ... ... iv. 428
gossypina, Nees... ... ... „ 428
leiosperma, *Clarke* ... ... „ 429
tomentosa, *Nees* ... ... „ 428
Wallichii, Nees ... ... „ 428
Ægialitis, *R. Br.* ... ... iii. 479
annulata, Kurz... ... ... „ 479
rotundifolia, *Roxb.* ... ... „ 479
rotundifolia, Presl ... ... „ 479
Ægiceras, *Gaertn.* ... ... iii. 533
corniculatum, Blanc. ... „ 533
ferreum, Bl. ... ... „ 533
floridum, R. & S. ... ... „ 533
fragrans, Koen. ... ... „ 533
majus, *Gaertn.* ... ... „ 533
Malaspinea, A. DC.... ... „ 533
minus, A. DC. ... ... „ 533
nigricans, A. Rich. ... ... „ 533
obovatum, Bl. ... ... „ 533
Ægilops ciliaris, Koen. ... vii. 367
ciliaris, Koen. ... ... „ 140
cordata, Linn. ... ... „ 367
cuneata, Roxb. ... ... „ 158
cylindrica, C. A. Mey. ... „ 367
exaltata, Linn. ... ... „ 160
muricata, Retz.... ... ... „ 140
saccharina, Walt. ... ... „ 296
sanguinea, Linn. ... ... „ 154
squarrosa, Linn. ... ... „ 367
Tauschii, Coss. ... ... „ 367
Æginetia, *Linn.* ... ... iv. 320
abbreviata, Ham. ... ... „ 320
acaulis, Walp. ... ... iv. 320, 321
indica, *Roxb.* ... ... iv. 320
pedunculata, *Wall.*... ... „ 320
Ægle, *Corr.* ... ... i. 516
Marmelos, *Corr.* ... ... „ 516
Æluropus, *Trin.* ... ... vii. 333
arabicus, Steud. ... ... „ 334
brevifolius, Nees ... ... „ 295
brevifolius, Wall. ... ... „ 334
concinnus, Fig. & Notar.... „ 334
lævis, Trin. ... ... vii. 295, 333
lagopodioides, Trin.... ... vii. 334
littoralis, Parl. ... ... „ 334
mucronatus, Aschers. ... „ 334
niliacus, Steud.... ... ... „ 334
niloticus, Edgew. ... ... „ 334
pubescens, Steud. .. ... „ 295
pubescens, Trin. ... ... „ 334
pungens, C. Koch ... ... „ 334
repens, Parl. ... ... „ 334
siniacus, Fig. & Notar. ... „ 334
villosus, *Trin.* ... ... „ 334
sp., Aitch. ... ... „ 328

Vol. Page
Aerachne eleusinoides, W. & A. vii. 295
verticillata, Lindl. ... ... ,, 295
Ærides, *Lour.* ... ... vi. 43, 178
affine, Wall. ... ... vi. 44
amplexicaule, Lindl.... ... ,, 40
ampullaceum, Roxb.... ... ,, 64
appendiculatum, Wall. ... ,, 67
Arachnites, Lindl. ... ... ,, 41
Arachnites, Sw.... ... ... ,, 28
Ballantinianum, Rchb. f. ,, 47
Borassi, Ham. ... ... ,, 48
Borassi, Sm. ... ... ,, 10
Brookeii, Lindl. ... ... ,, 46
calceolare, Sm. ... ... ,, 60
carnosum, Griff. ... ... ,, 32
cornutum, Roxb. ... ... ,, 47
crassifolium, *Par. & Rchb. f.* ,, 46
crispum, *Lindl.* ... ... ,, 45
cristatum, Wall. ... ... ,, 53
cylindricum, *Lindl.*... vi. 44, 196
cylindricum, Hook. ... ... vi. 44
cylindricum, Linn. ... ... ,, 198
dasypogon, Sm.... ... ... ,, 66
decumbens, *Griff.* ... ... ,, 48
densiflorum, Wall. ... ... ,, 72
difforme, Wall.... ... ... ,, 76
Emericii, *Rchb. f.* ... ... ,, 47
expansum, Rchb. f. ... ... ,, 46
falcatum, *Lindl.* ... ... ,, 46
Fieldingii, *Lodd.* ... ... ,, 45
flavidum, Lindl.... ... ... ,, 47
guttatum, Roxb. ... ... ,, 32
Hystrix, Lindl. ... ... ,,39, 76
illustre, Rchb. f. ... ... ,, 45
Larpentæ, Hort. ... ... ,, 46
lasiopetalum, Willd. ... ,, 48
latifolium, Thw. ... ... ,, 32
leopardorum, Wall. ... ... ,, 60
lepidum, *Rchb. f.* ... ... ,, 48
Lindleyanum, Wight ... ,, 45
lineare, *Hk. f.* ... ... ,, 47
Lobbii, Hort. ... ... ,, 45
longicornu, *Hk. f.* ... ... ,, 44
maculatum, Sm. ... ... ,, 51
maculosum, *Lindl.* ... ... ,, 45
Mendelii, Jenn. ... ... ,, 48
mitratum, *Rchb. f.* ... ... ,, 44
multiflorum, *Roxb.* ... ... ,, 44
nobile, Warn. ... ... ,, 47
odoratum, *Lour.* ... ... ,, 47
pachyphyllum, *Rchb. f.* ... ,, 48
pallidum, Roxb. ... ... ,, 36
præmorsum, Willd. ... ... ,, 32
racemiferum, Wall. ... ... ,, 68
radiatum, Roxb. ... ... v. 774
radicosum, *A. Rich.* ... vi. 46
ramosum, Wall... ... ... ,, 72

Ærides Vol. Page
Reichenbachii, Linden ... vi. 47
retrofractum, Wall. ... ... ,, 46
retusum, Sw. ... ... ,, 32
rigidum, Ham. ... ... ,, 48
rigidum, Sm. ... ... ,, 197
Rohanianum, Rchb. f. ... ,, 47
roseum, Lodd. ... ... ,, 45
rostratum, Roxb. ... ... ,, 36
spicatum, D. Don ... ... ,, 32
suaveolens, Roxb. ... ... ,, 34
suavissimum, *Lindl.* ... ,, 47
tæniale, Lindl. ... ... ,, 31
tessellatum, Wight ... ... ,, 52
testaceum, Lindl. ... ... ,, 50
trigonum, Klotz. ... ... ,, 45
umbellatum, Wall. ... ... ,, 61
undulatum, Sm. ... ... ,, 63
Vandarum, *Rchb. f.*... ... ,, 44
Veitchii, Hort. ... ... ,, 45
viridiflorum, Thw. ... vi. 38, 196
Warneri, Hort.... ... ... vi. 46
Wightianum, Lindl.... ... ,, 50
Williamsi, Warn. ... ... ,, 45
sp., Griff. ... ... ,, 53
Ærobion carinatum, Spreng. vi. 1, 195
Ærua, *Forsk.*... ... ... iv. 727
ægyptiaca, Gmel. ... ... ,, 727
Bovii, Edgew. ... ... ,, 727
brachiata, Mart. ... ... ,, 726
chenopodiifolia, Bojer ... ,, 726
floribunda, Wight ... ... ,, 728
glabrata, *Hk. f.* ... ... ,, 728
incana, Mart. ... ... ,, 727
javanica, *Juss.*... ... ... ,, 727
lanata, *Juss.* ... ... ,, 728
Monsonia, *Mart.* ... ... ,, 728
? *nervosa*, Mart. ... ... ,, 729
pubescens, Mart. ... ... ,, 729
radicans, *Mart.* ... ... ,, 729
sanguinolenta, Bl. ... ... ,, 728
scandens, *Wall.* ... ... ,, 727
scandens, Gamble ... ... ,, 729
? *setacea*, Mart. ... ... ,, 729
timorensis, Moq. ... ... ,, 728
tomentosa, Forsk. ... ... ,, 727
velutina, Moq. ... ... iv. 724, 728
Wallichii, Moq. ... ... iv. 727
Wightii, *Hk. f.* ... ... ,, 728
Æschynanthoidea, Griff. ... iv. 342
Æschynanthus, *Jack*... ... iv. 337
acuminata, *Wall.* ... ... ,, 341
acuminata, G. Don ... ... ,, 359
Andersoni, Clarke ... ... ,, 341
bracteata, *Wall.* ... ... ,, 342
bracteata, Benth. ... ... ,, 341
ceylanica, *Gardn.* ... ... ,, 340
ceylanica, Wight ... ... ,, 340

Æschynanthus Vol. Page
chinensis, Gard. & Champ. iv. 341
chiritoides, *Clarke* ... ... „ 341
conferta, Griff. ... ... „ 344
fulgens, *Wall.* ... ... „ 338
gracilis, Parish ... ... „ 340
grandiflora, *Spreng.* ... „ 338
Griffithii, *Br.* ... ... „ 339
Hookeri, *Clarke* ... ... „ 338
Kingii, *Clarke* ... ... „ 342
levipes, *Clarke* ... ... „ 341
Lobbiana, Hook. ... ... „ 343
longicaulis, *Wall.* ... ... „ 337
longiflora, Wall. ... ... „ 342
maculata, *Lindl.* ... ... „ 339
Mannii, *Kurz* ... ... „ 341
Masoniæ, *Kurz* ... ... „ 341
micrantha, *Clarke* ... ... „ 340
obconica, *Clarke* ... ... „ 343
parasitica, Clarke ... ... „ 338
parasitica, Wall. iv. 338, 339, 340
parviflora, G. Don ... ... iv. 339
parviflora, Clarke ... ... „ 340
Paxtoni, Lindl. ... ... „ 342
Peelii, Hk. f. ... ... „ 342
Perrottetii, A. DC. ... ... „ 339
Perrottetii, Gardn. ... ... „ 340
radicans, *Jack* ... ... „ 343
radicans, Wall. ... ... iv. 339, 343
ramosissima, *Wall.* ... ... iv. 339
superba, *Clarke* ... ... „ 342
Wallichii, *Br.* ... ... „ 343
sp., Griff. ... ... iv. 338, 339, 342
sp., Hk. f. & T. iv. 338, 339, 340, 342, 343
Æschynomene, *Linn.* ... ... ii. 151
aspera, *Linn.* ... ... „ 152
aspera, Wall. ... ... „ 151
bispinosa, Jacq. ... ... „ 115
cannabina, Retz. ... ... „ 115
coccinea, Desv. ... ... „ 115
coccinea, Linn. ... ... „ 115
diffusa, Roxb. ... ... „ 115
diffusa, Willd. ... ... „ 151
grandiflora, Linn. ... ... „ 115
indica, *Linn.* ... ... „ 151
indica, Burm. ... ... „ 114
indica, Wall. ... ... „ 152
kashmiriana, Camb. ... ... „ 151
paludosa, Roxb. ... ... „ 115
procumbens, Roxb. ... ... „ 115
pumila, Linn. ... ... „ 151
Roxburghii, Spreng. ... „ 151
Sesban, Linn. ... ... „ 114
spinulosa, Roxb. ... ... „ 115
surattensis, W. & A. ... „ 152
trachyloba, Miq. ... ... „ 152
uliginosa, Roxb. ... ... „ 115
Æschynomene Vol. Page
viscidula, Willd. ... ... ii. 151
Æsculus, *Linn.* ... ... i. 675
asamicus, Griff. ... ... „ 675
Hippocastanum, Linn. ... „ 675
indica, *Hiern* ... ... „ 675
punduana, *Hiern* ... ... „ 675
Ætheilema mucronatum, ? Griff. iv. 417
parviflorum, Spreng. ... „ 417
reniforme, Nees ... ... „ 417
sp., Griff. ... ... „ 417
Ætheria, Endl. ... ... vi. 114
fusca, Lindl. ... ... vi. 97, 112
mollis, Lindl. ... ... vi. 109
Afzelia, *Sm.* ... ... ii. 274
bijuga, *A. Gray* ... ... „ 274
? coriacea, *Baker* ... ... „ 275
palembanica, *Baker* ... „ 275
retusa, *Kurz* ... ... „ 274
Agalma æsculifolium, Seem. ii. 738
elatum, Seem. ... ... „ 728
glaucum, Seem. ... ... „ 728
Griffithii, Seem. ... ... „ 728
racemosum, Seem. ... ... „ 729
rostratum, Seem. ... ... „ 729
tomentosum, Seem. ... ... „ 728
Aganope floribunda, Miq. ... ii. 246
Aganosma, G. Don ... ... iii. 663
acuminata, G. Don ... ... „ 663
Blumei, Wight ... ... „ 664
calycina, A. DC. ... ... „ 664
caryophyllata, *G. Don* ... „ 664
concanensis, Hook. ... ... „ 650
cymosa, *G. Don* ... ... „ 665
cymosa, G. Don ... ... „ 665
Doniana, Wight ... ... „ 665
Edithæ, Hance ... ... iv. 6
elegans, G. Don ... ... iii. 665
gracilis, *Hk. f.* ... ... „ 664
lævigata, Grah. ... ... „ 665
macrocarpa, A. DC. ... ... „ 663
marginata, *G. Don* ... ... „ 663
Roxburghii, G. Don ... ... „ 665
Wallichii, G. Don ... ... „ 665
Agapetes, *D. Don* ... ... iii. 443
acuminata, G. Don ... ... „ 455
angulata, *Hk. f.* ... ... „ 447
? *arborea*, DC. ... ... „ 455
auriculata, *Hk. f.* ... ... „ 444
bracteata, *Hk. f.* ... ... „ 448
buxifolia, *Nutt.* ... ... „ 447
campanulata, *Clarke* ... „ 449
discolor, *Clarke* ... ... „ 448
glabra, *Clarke* ... ... „ 444
grandiflora, *Hk. f.* ... ... „ 446
Griffithii, *Clarke* ... ... „ 449
hirsuta, Klotz. ... ... „ 443
linearifolia, *Clarke* ... ... „ 449

Agapetes ... Vol. Page
Lobbii, *Clarke* ... iii. 448
loranthifolia, *D. Don* ... „ 446
macrantha, *Hk. f.* ... „ 446
macrophylla, *Clarke* ... „ 445
macrostemon, *Clarke* ... „ 443
miniata, *Hk. f.* ... „ 445
mitrarioides, *Hk. f.* ... „ 447
nana, *Hk. f.* ... „ 448
Nuttallii, *Clarke* ... „ 445
obovata, *Hk. f.* ... „ 447
odontocera, Hk. f. ... „ 446
Parishii, *Clarke* ... „ 445
pilifera, *Hk. f.* ... „ 448
pulcherrima, Hk. f. ... „ 446
salicifolia, *Clarke* ... „ 445
saligna, *Hk. f.* ... „ 444
serrata, G. Don ... „ 452
setigera, *D. Don* ... „ 443
Sprengelii, G. Don ... „ 453
symplocifolia, G. Don ... „ 455
variegata, *D. Don* ... „ 446
variegata, DC. ... „ 443
variegata, Hk. f. ... „ 443
verticillata, D. Don ... „ 443
Wallichiana, Klotz. ... „ 443
Agasta, Miers ... ii. 507
asiatica, Miers ... „ 507
indica, Miers ... „ 507
splendida, Miers ... „ 507
Agathis, *Salisb.* ... v. 650
Dammara, Rich. ... „ 650
loranthifolia, *Salisb.* ... „ 650
Agathisanthes javanica, Bl. ii. 747
Agathotes alata, D. Don ... iv. 125
Chirata, D. Don ... „ 124
Agati grandiflora, Desv. ... ii. 115
Agave americana, Linn. ... vi. 277
Cantula, Roxb. ... „ 277
vivipara, Linn. ... „ 277
Agelæa, *Soland.* ... ii. 46
vestita, *Hk. f.* ... „ 46
Wallichii, *Hk. f.* ... „ 47
Ageratum, *Linn.* ... iii. 243
aquaticum, Roxb. ... „ 242
conyzoides, *Linn.* ... „ 243
cordifolium, Roxb. ... „ 243
strictum, Sims ... „ 242
Aggeranthus marchantioides, Wight, lapsu *Aggeianthus reticulatus* ... v. 786
Aglaia, *Lour.* ... i. 554
? andamanica, *Hiern* ... „ 555
apiocarpa, *Hiern* ... „ 555
chittagonga, Miq. ... „ 560
cordata, *Hiern* ... „ 557
crassinervia, *Kurz* ... „ 556
? *decandra*, Wall. ... „ 562

Aglaia ... Vol. Page
Dookkoo, Griff. ... i. 558
edulis, *A. Gray* ... „ 556
glabriflora, *Hiern* ... „ 555
grata, Wall. ... „ 555
khasiana, *Hiern* ... „ 554
lepidota, Miq. ... „ 555
midnaporensis, Carey ... „ 555
minutiflora, *Bedd.* ... i. 557, 690
odorata, *Lour.* ... i. 554
palembanica, *Miq.* ... „ 557
pentaphylla, Kurz ... „ 554
perviridis, *Hiern* ... „ 556
polyantha, Bedd. ... „ 557
? *polystachya*, Wall. ... „ 559
Roxburghiana, *Miq.* ... „ 555
sexipetala, Griff. ... „ 556
Sippannas, Miq. ... „ 557
Spanoghei, Bl. ... „ 555
spectabilis, Hort. Calc. ... „ 561
tenuicaulis, *Hiern* ... „ 556
tomentosa, Teysm. & Binn. „ 557
Wallichii, *Hiern* ... i. 555, 685
sp., Teysm. & Binn. ... i. 555
? *sp.*, Wall. ... „ 555
Aglaodorum Griffithii, Schott vi. 528
Aglaonema, *Schott* ... vi. 528
birmanicum, *Hk. f.* ... „ 529
Clarkei, *Hk. f.* ... „ 529
costatum, *N. E. Br.* ... „ 531
? *Cuscuaria*, Miq. ... „ 543
Griffithii, *Schott* ... „ 528
Helferi, *Hk. f.* ... „ 529
Hookerianum, *Schott* ... „ 529
integrifolium, Schott ... „ 529
longecuspidatum, Schott... „ 530
malaccense, Schott ... „ 530
minus, *Hk. f.* ... „ 530
nanum, *Hk. f.* ... „ 530
nicobaricum, *Hk. f.* ... „ 530
nitidum, Kunth ... „ 529
oblongifolium, *Schott* ... „ 528
palustre, Teysm. & Binn. „ 528
pictum, Engl. ... „ 530
pumilum, *Hk. f.* ... „ 530
Schottianum, *Miq.* ... „ 529
Scortechinii, *Hk. f.* ... „ 530
Agraulus caninus, Beauv. ... vii. 255
Agrimonia, *Linn.* ... ii. 361
Eupatorium, *Linn.* ... „ 361
Eupatorium, Thw. ... „ 362
javanica, Miq. ... „ 361
lanata, Wall. ... „ 361
nepalensis, D. Don ... „ 361
pilosa, *Ledeb.* ... „ 361
viscidula, Bunge ... „ 361
zeylanica, *Moon* ... „ 362
Agropyron, *J. Gaertn.* ... vii. 367

Agropyron Vol. Page
acutum, R. & S. ... ... vii. 370
caninum, R. & S. ... ... ,, 368
dentatum, *Hk. f.* ... ... ,, 370
geminatum, Schult. ... ,, 294
Jacquemontii, *Hk. f.* ... ,, 369
longe-aristatum, *Boiss.* ... ,, 368
repens, *Beauv.* ... ... ,, 370
semicostatum, *Nees* ... ,, 369
striatum, *Nees* ... ... ,, 369
Thomsoni, *Hk. f.* ... ... ,, 370
Agrostemma inflata, G. Don i. 225
AGROSTIDEÆ ... ... vii. 5, 223
Agrostis, *Linn.* ... ... vii. 253
abnormis, Munro ... ... ,, 268
adscendens, Lange ... ... ,, 254
alba, *Linn.* ... ... ,, 254
alopecuroides, Lamk. ... ,, 245
alopecuroides, Vahl ... ... ,, 39
anatolica, C. Koch ... ... ,, 254
arundinacea, Linn. ... ... ,, 266
barbata, Pers. ... ... ,, 249
bermudiana, Tussac ... ,, 289
bicuspidata, Hack. ... ... ,, 264
biseta, Spreng. ... ... ,, 77
brachiata, *Munro* ... ... ,, 256
canina, *Linn.* ... ... ,, 255
canina, Munro ... ... ,, 257
chinensis, Koen. ... ... ,, 298
ciliata, Str. & Wint. ... ,, 263
ciliata, Trin. ... ... ,, 264
Clarkei, *Hk. f.* ... ... ,, 257
contracta, Heyne ... ... ,, 247
coromandeliana, Retz. ... ,, 253
crinita, Moench ... ... ,, 245
densa, Bieb. ... ... ,, 254
diandra, Retz. ... ... ,, 247
diffusa, Bess. ... ... ,, 254
diffusa, Host ... ... ,, 254
diffusa, Muehlb. ... ... ,, 259
divaricata, *Griseb.* ... ... ,, 258
effusa, Lamk. ... ... ,, 235
elongata, Lamk. ... ... ,, 248
elongata, Roth ... ... ,, 251
fertilis, Steud. ... ... ,, 248
filiformis, Koen. ... vii. 289, 290
filipes, *Hk. f.* ... ... vii. 256
fusca, Heyne ... ... ,, 72
Hookeriana, *Clarke*... ... ,, 256
Hookeriana, Munro ... vii. 256, 264
Hookeriana, Wight ... ... vii. 255
inæquiglumis, *Griseb.* ... ,, 257
indica, Forsk. ... ... ,, 253
indica, Linn. ... ... ,, 248
involuta, Poir. ... ... ,, 251
juncea, Lamk. ... ... ,, 250
latifolia, Heyne ... ... ,, 61
laxa, Rottl. ... ... ,, 242

Agrostis Vol. Page
lenta, Ait. ... ... vii. 18
linearis, Retz. ... ... ,, 289
littoralis, Knapp ... ... ,, 246
littoralis, Lamk. ... ... ,, 249
longiaristata, Ross. ... ... ,, 233
lutosa, Poir. ... ... ,, 246
malaccensis, Koen. ... ... ,, 246
Matrella, Linn.... ... ... ,, 99
maxima, Roxb. ... ... ,, 61
Michauxii, Str. & Wint.... ,, 254
micrantha, *Steud.* ... ... ,, 256
monostachys, Poir. ... ... ,, 39
montana, Rottl.... ... ... ,, 298
Muelleri, Presl ... ... ,, 254
Munroana, Aitch. & Hemsl. ,, 263
mutabilis, Knapp ... ... ,, 254
myriantha, *Hk. f.* ... ... ,, 257
Neesii, Steud. ... ... ,, 264
nervosa, *Nees* ... vii. 256, 258, 264
? *nutans*, Poir. ... ... vii. 60
orientalis, Nees ... ... ,, 251
panicea, Willd.... ... ... ,, 245
peninsularis, *Hk. f.* ... ,, 255
Phuldubbha, Ham. ... ... ,, 250
pilosula, Hack.... ... ... ,, 263
pilosula, Trin. ... ... ,, 264
plumosa, Ten. ... ... ,, 65
procera, *Retz.*... ... ... ,, 258
pulchella, Roth ... ... ,, 252
punctata, Lamk. ... ... ,, 21
pungens, Heyne ... ... ,, 251
pungens, Pursh ... ... ,, 249
refracta, Moench ... ... ,, 254
? *Rora*, Ham. ... ... ,, 245
Royleana, Duthie ... vii. 263, 264
Royleana, Hack. ... ... vii. 264
Royleana, Munro ... ... ,, 263
Royleana, Nees... ... ... ,, 264
Royleana, Trin. vii. 254, 263, 265
Roylei, Trin. ... ... vii. 264
Rura, Ham. ... ... ,, 253
scoparia, Koen. vii. 61, 70, 242
spicæformis, Linn. f. ... vii. 98
spicata, Vahl ... ... ,, 251
stellata, Willd. ... ... ,, 289
stolonifera, Host ... ... ,, 254
stolonifera, Linn. ... ... ,, 254
subaristata, *Ait. & Hemsl.* ,, 255
sylvatica, Torrey ... ... ,, 259
tenacissima, Jacq. ... ... ,, 248
tenacissima, Linn. f. ... ,, 251
tenacissima, Roxb. ... ... ,, 250
tenuissima, Spreng. ... ,, 248
tremula, Willd.... ... ... ,, 250
triaristata, Knapp ... ... ,, 245
triracemosa, Roxb. ... ... ,, 18
verticillata, *Vill.* ... ... ,, 254

Agrostis Vol. Page
verticillata, Lam. ... ... vii. 186
Villarsii, Poir. ... ... „ 254
villosa, Koen. ... ... „ 19
virgata, Rottl. & Hb. Madr. „ 298
virginica, Forsk. ... ... „ 251
virginica, Linn. ... ... „ 249
Wallichiana, Steud. ... „ 264
Wightii, *Nees* ... ... „ 258
Wightii, Munro... ... ... „ 257
Wightii, Schmid. ... ... „ 254
Zenkeri, *Steud*.... ... ... „ 258
zeylanica, ? Wight. ... ... „ 58
sp., Hk. f. & T. ... vii. 257, 258, 268
sp.. Str. & Wint. ... vii. 263, 264
sp., Wall. ... ... vii. 245, 257
Agrostistachys, *Dalz*. ... ... v. 405
filipendula, *Hk. f.* ... ... „ 407
Gaudichaudi, *Muell*. ... „ 406
Hookeri, *Benth*. ... ... „ 406
indica, *Dalz*. ... ... „ 406
longifolia, *Benth*. ... ... „ 407
longifolia, Kurz ... ... „ 406
Maingayi, *Hk. f.* ... ... „ 406
Agrostophyllum, *Bl*. ... ... v. 823
callosum, *Rchb. f.* ... ... „ 824
glumaceum, *Hk. f.* v. 824, vi. 193
khasianum, *Griff*. ... ... v. 824
longifolium, Bl. ... ... „ 824
majus, *Hk. f.* ... v. 824, vi. 193
pauciflorum, *Hook, f.* v. 824, vi. 193
planicaule, Rchb. f. ... v. 824
zeylanicum, *Hk. f.* ... ... „ 825
Agyneia, *Vent*. ... ... v. 285
affinis, Kurz ... ... „ 285
bacciformis, *A. Juss*. ... „ 285
ciliata, Wall. ... ... „ 397
coccinea, Ham. ... ... „ 308
flexuosa, Heyne ... ... „ 311
impubes, Hb. Madr. ... ... „ 308
impubes, Vent. ... ... „ 285
latifolia, Moon Cat.... ... „ 347
multilocularis, Willd. ... „ 307
obliqua, Willd. ... ... „ 311
ovata, Miq.... ... ... „ 332
phyllanthoides, Spreng. ... „ 285
? *pinnata*, Miq. ... ... „ 317
pubera, Hb. Madr. ... ... „ 307
tetrandra, Ham. ... ... „ 304
Aikinia carnosa, G. Don ... iv. 369
Aikinia elegans, Wall. ... vii. 161
Ailantus, *Desf*. ... ... i. 518
excelsa, *Roxb*. ... ... „ 518
glandulosa, *Desf*. ... ... „ 518
malabarica, *DC*. ... ... „ 518
Ainsliæa, *DC*. ... ... iii. 388
angustifolia, *Hk. f. & T.* ... „ 388
aptera, *DC*. ... ... „ 388

Ainsliæa Vol. Page
Brandisiana, *Kurz* ... ... iii. 389
glumacea, Klatt ... ... „ 388
pteropoda, *DC*. ... ... „ 388
silhetensis, Clarke ... ... „ 388
Aira, *Linn*. ... ... vii. 272, 422
altaica, Trin. ... ... vii. 338
aquatica, Linn.... ... ... „ 310
benghalensis, Gmel. ... ... „ 303
brasiliensis, Spreng. ... „ 73
brevifolia, Bieb. ... ... „ 273
cæspitosa, Linn. ... ... „ 273
canescens, Host. ... ... „ 272
capillaris, Heyne ... ... „ 58
caryophyllea, *Linn*.... vii. 272, 422
chinensis, Retz.... ... ... vii. 65
cœrulea, Heyne... ... ... „ 25
cœrulea, Wall. ... ... „ 273
cristata, Linn. ... ... „ 308
Cupaniana, Guss. ... ... „ 272
curta, Jord. ... ... „ 272
divaricata, Pourr. ... ... „ 272
effusa, Spreng. ... ... „ 269
filiformis, Koen. ... ... „ 299
filiformis, Roxb. ... ... „ 298
glauca, Spreng. ... ... „ 308
? *indica*, Linn. ... ... „ 41
interrupta, Rottl. ... ... „ 43
ischæmoides, Koen.... ... „ 25
Kingii, Hk. f. ... ... „ 273
major, Syme ... ... „ 273
malatrina, Ham. .. ... „ 97
micans, Jacq. ... ... „ 273
multicaulis, Kunth ... ... „ 272
multiculmis, Dumort. ... „ 272
patulipes, Jord. ... ... „ 272
plesiantha, Jord. ... ... „ 272
purpureo-argentea, Gilib. „ 272
repens, Heyne ... ... „ 57
rigida, Dulac. ... ... „ 272
spicata, Linn. ... ... „ 278
subspicata, Linn. ... ... „ 278
Todari, Tenore ... ... „ 272
triaristata, Clarke ... ... „ 272
triflora, Trin. ... ... „ 273
viatica, Griff. ... ... „ 64
Wilhelmsii, Steud. ... ... „ 273
sp., Griff. ... ... vii. 69, 243
Airacea, Griff. ... ... vii. 73
Airochloa, Link ... ... vii. 308
cristata, Link ... ... „ 308
gracilis, Link ... ... „ 308
pubescens, Link ... ... „ 308
valesiaca, Link ... ... „ 308
AIZOIDEÆ ... ... ii. 658
Aizoon, *Linn*. ... ... ii. 659
canariense, *Linn*. ... ... „ 659
Ajuga, *Linn*. ... ... iv. 702

Ajuga Vol. Page
brachystemon, *Maxim.* ... iv. 703
bracteosa, *Wall.* ... ... „ 702
decumbens, D. Don ... ... „ 704
decumbens, Thunb. ... ... „ 704
densiflora, Wall. ... ... „ 703
depressa, Maxim. ... ... „ 703
disticha, Roxb. ... ... „ 672
fruticosa, Roxb. ... ... „ 673
furcata, Link ... ... „ 672
geniculata, Maxim. ... ... „ 704
laxa, Ham. ... ... „ 701
lobata, *D. Don* ... ... „ 702
macrosperma, *Wall.* ... „ 704
? ovata, *Wall.* ... ... „ 704
parviflora, *Benth.* ... ... „ 703
remota, Benth. ... ... „ 703
repens, Roxb. ... ... „ 704
sikkimensis, Miq. ... ... „ 704
Thomsoni, Maxim. ... ... „ 704
AJUGOIDEÆ ... ... iv. 607
Alangium, *Lamk.* ... ... ii. 741
decapetalum, Lamk. ... „ 741
ebenaceum, Griff. ... ... „ 742
glandulosum, Thw. ... ... „ 742
hexapetalum, Lamk. ... „ 741
Lamarckii, *Thw.* ... ... „ 741
latifolium, Miq. ... ... „ 741
sundanum, Kurz ... ... „ 741
tomentosum, Lamk ... ... „ 741
Albersia caudata, Boiss. ... iv. 721
livida, Kunth ... ... „ 721
oleracea, Kunth ... ... „ 721
polygama, Boiss. ... ... „ 721
ALBERTEÆ ... ... iii. 20, 131
Albikkia schœnoides, Presl.... vi. 678
scirpoides, Presl. ... ... „ 678
Albizzia, *Durazz.* ... ... ii. 298
affinis, Fourn. ... ... „ 301
amara, *Boiv.* ... ... „ 301
glomeriflora, *Kurz* ... ... „ 300
Julibrissin, *Durazz.* ... „ 300
latifolia, Boiv. ... ... „ 298
Lebbek, *Benth.* ... ... „ 298
lebekkioides, Benth. ... ... „ 299
lophantha, Benth. ... ... „ 298
lucida, *Benth.* ... ... „ 299
micrantha, Boiv. ... ... „ 299
myriophylla, *Benth.* ... „ 300
odoratissima, *Benth.* ... „ 299
pedicellata, *Baker* ... ... „ 299
procera, *Benth.* ... ... „ 299
sericocephala, Benth. ... „ 301
stipulata, *Boiv.* ... ... „ 300
umbrosa, Benth. ... ... „ 302
Wightii, Grah. ... ... „ 301
Alchemilla, *Linn.* ... ... ii. 360
ceylanica, Moon ... ... „ 361

Alchemilla Vol. Page
indica, *Gardn.* ... ... ii. 361
vulgaris, *Linn.* ... ... „ 360
vulgaris, Wight ... ... „ 361
Alchornea, *Sw.* ... ... v. 420
discolor, *Hk. f.* ... ... „ 421
javensis, Muell. ... ... „ 422
mollis, *Muell.* ... ... „ 420
rugosa, *Muell.* ... ... „ 422
tiliæfolia, *Muell.* ... ... „ 421
villosa, *Muell.* ... ... „ 421
Zollingeri, Hassk. ... ... „ 421
sp. ... ... „ 422
Aldrovanda, *Linn.* ... ... ii. 425
verticillata, Roxb. ... ... „ 425
vesiculosa, *Linn.* ... ... „ 425
Alectoridia Quartiniana, A. Rich. ... ... vii. 146
Alectra, *Thunb.* ... ... iv. 297
cordata, Benth. ... ... „ 297
indica, *Benth.* ... ... „ 297
orobanchoides, Benth. ... „ 297
? Thomsoni, *Hk. f.* ... ... „ 297
Aletris, *Linn.* ... ... vi. 264
hyacinthoides, Linn. ... „ 270
khasiana, *Hk. f.* ... ... „ 265
lanuginosa, Bureaud & Franch. ... ... „ 265
litoralis, Kœn. ... ... „ 264
nepalensis, *Hk. f.* ... ... „ 264
sikkimensis, *Hk. f.* ... ... „ 265
zeylanica, Mill. ... ... „ 270
Aleurites, *Forst.* ... ... v. 384
ambinux, Pers. ... ... „ 385
cordata, Muell. ... ... „ 384
cordifolia, Steud. ... ... „ 385
laccifera, Willd. ... ... „ 388
molluccana, *Willd.* ... ... „ 384
triloba, Forst. ... ... v. 239, 385
Alhagi, *Desv.* ... ... ii. 145
mannifera, Desv. ... ... „ 145
maurorum, *Desv.* ... ... „ 145
napaulensium, DC. ... ... „ 145
Alisma, *Linn.* ... ... vi. 559
apetalum, Ham. ... ... „ 560
calophyllum, Wall. ... ... „ 560
cristatum, Wall. ... ... „ 561
glandulosum, Thw. ... ... „ 560
? *Hamiltonianum*, Wall.... „ 561
? *intermedium*, Griff. ... „ 559
Kotschyi, Hochst. ... ... „ 560
obtusifolium, Thw. ... ... „ 560
oligococcum, *F. Muell.* ... „ 560
parnassifolium, Mich. ... „ 560
Plantago, *Linn.* ... ... „ 559
pubescens, Ham. ... ... „ 561
ranunculoides, All. ... ... „ 560
reniforme, *D. Don* ... ... „ 560

Alisma ... Vol. Page
sagittifolium, Willd. ... vi. 560
stellatum, Ham. ... „ 561
ALISMACEÆ ... vi. 559
Allæanthus, *Thw.* ... v. 490
Kurzii, *Hk. f.* ... „ 490
zeylanicus, *Thw.* ... „ 490
Allæophania, *Thw.* ... iii. 48
Arnottii, *Hk. f.* ... „ 48
decipiens, *Thw.* ... „ 48
Allardia, *Dcne.* ... iii. 312
glabra, *Dcne.* ... „ 313
glabra, Schultz ... „ 313
Hugelii, Schultz ... „ 313
incana, *Klatt* ... „ 314
nivea, *Hk. f. & T.* ... „ 313
Stoliczkai, *Clarke* ... „ 313
tomentosa, *Dcne.* ... „ 313
tridactylites, Hk. f. & T. ... „ 313
tridactylites, Schultz ... „ 313
vestita, *Hk. f. & T.* ... „ 313
Allelotheca Urvillei, Steud. vii. 331
Alliaria officinalis, Andr. ... i. 151
ALLIEÆ ... vi. 301
Allium, *Linn.* ... vi. 337
Ampeloprasum, *Linn.* ... „ 337
ascalonicum, *Linn.* ... „ 337
atropurpureum, *Waldst. & Kit.* ... „ 344
atrosanguineum, *Schrenk* „ 338
auriculatum, *Kunth* ... „ 342
Bakeri, *Regel* ... „ 341
blandum, *Wall.* ... „ 339
cæruleum, Wall. ... „ 341
Cepa, *Linn.* ... „ 337
Clarkei, *Hk. f.* ... „ 344
consanguineum, *Kunth* ... „ 340
Cumaria, Ham. ... „ 337
ellipticum, Wall. ... „ 342
exsertum, Baker ... „ 341
Fedschenkoanum, *Regel* ... „ 338
Govanianum, *Wall.* ... „ 344
grandiflorum, Ledeb. ... „ 339
Griffithianum, Boiss. ... „ 339
Hookeri, *Thw.* ... „ 341
humile, Kunth ... „ 344
Jacquemontii, *Regel* ... „ 342
Jacquemontii, Kunth ... „ 339
junceum, Jacquem ... „ 342
leptophyllum, Wall. ... vi. 339, 342
lilacinum, *Royle* ... vi. 339
longisepalum, Bertol. ... „ 339
longistamineum, Royle ... „ 340
loratum, *Baker* ... „ 345
macranthum, *Baker* ... „ 345
narcissiflorum, Vill. ... „ 345
narcissifolium, Linn. ... „ 345
nivale, Jacq. ... „ 344

Allium Vol. Page
obtusifolium, Kl. & Gar. ... vi. 339
odorum, *Linn.* ... „ 343
oreoprasum, *Schr.* ... „ 344
Pallasi, Bunge ... „ 339
platyspathum, *Schr.* ... „ 340
Porrum, Linn. ... „ 337
robustum, Kar. & Kir. ... „ 345
Roxburghii, G. Don ... „ 343
rubellum, *M. Bieb.* ... „ 339
rubellum, Ledeb. ... „ 339
rubens, Baker ... „ 339
sativum, *Linn.* ... „ 337
Schoenoprasum, *Linn.* ... „ 338
Schrenki, *Regel* ... „ 343
Semenovii, *Regel* ... „ 338
senescens, Miq. ... „ 343
sibiricum, Linn. ... „ 338
sikkimense, *Baker* ... „ 341
splendens, Miq. ... „ 341
Stracheyi, *Baker* ... „ 340
strictum, Schrad. ... „ 343
Sulvia, Ham. ... „ 337
syntamanthum, C. Koch ... „ 339
tataricum, Ait. ... „ 343
tenue, G. Don ... „ 339
Thomsonii, *Baker* ... „ 340
tuberosum, *Roxb.* ... „ 343
uliginosum, G. Don ... „ 343
victorialis, *Linn.* ... „ 342
violaceum, Wall. ... „ 341
vulcanicum, Boiss. ... „ 339
Wallichii, *Kunth* ... „ 341
Allmania, *Br.* ... iv. 716
albida, *Br.* ... „ 717
aspera, Wight ... „ 717
dichotoma, Wight ... „ 717
esculenta, Br. ... „ 717
nodiflora, *Br.* ... „ 716
nodiflora, Wall. ... „ 717
nodiflora, Wight ... „ 717
procumbens, Wight ... „ 717
Allomorphia, *Bl.* ... ii. 527
exigua, *Bl.* ... „ 527
Griffithii, *Hk. f.* ... „ 527
hispida, *Kurz* ... „ 527
umbellulata, *Hk. f.* ... „ 527
Allophylus, *Linn.* ... i. 673
Aporetica ... „ 674
Cobbe, *Bl.* ... „ 673
distachys ... „ 674
glaber ... „ 674
lanatus, Roxb. ... „ 674
ornitrophioides, Roxb. ... „ 674
pinnatus, Roxb. ... vi. 674, 680
racemosus ... „ 674
Rheedii ... „ 674
serratus ... „ 674

Allophylus ... Vol. Page
ternatus, Lour. ... vi. 674
villosus ... „ 674
zeylanicus, *Linn.* ... „ 673
Allopythion Hookeri, Schott vi. 518
Allozygia cernua, Naud. ... ii. 526
Alnus, *Gaertn.* ... v. 600
dioica, Roxb. ... „ 348
integrifolia, Roxb. ... „ 348
nepalensis, *D. Don* ... „ 600
nitida, *Endl.* ... „ 600
Alocasia, *Schott* ... vi. 524
acuminata, *Schott* ... „ 527
alba, Schott ... „ 528
amabilis, Hort. ... „ 527
Beccarii, *Engl.* ... „ 527
commutata, Schott ... „ 526
cucullata, *Schott* ... „ 525
decipiens, *Schott* ... „ 526
denudata, *Engl.* ... „ 525
fallax, *Schott* ... „ 527
fornicata, *Schott* ... „ 526
indica, *Schott* ... „ 525
Jenningsii, Veitch ... „ 523
longiloba, *Miq.* ... „ 527
macrorrhiza, *Schott* ... „ 526
montana, *Schott* ... „ 525
navicularis, *Koch & Bouché* „ 527
odora, C. Koch ... „ 526
perakensis, Hemsl. ... „ 528
rapiformis, *Schott* ... „ 525
rugosa, Schott ... „ 525
singaporensis, Lind. ... „ 525
sp., Griff ... „ 528
Aloe perfoliata, Willd. ... vi. 264
vera, Linn. ... „ 264
zeylanica, Jacq. ... „ 270
Alopecurus, *Linn.* ... vii. 237
agrestis, *Linn.* ... „ 239
altissimus, Schur. ... „ 238
aristatus, Gouan ... „ 245
aristulatus, *Michx.* ... „ 238
arundinaceus, *Poir.* ... „ 238
australis, Nees ... „ 239
brachystachys, Bieb. ... „ 238
? *diandrus*, Griff. ... „ 239
elatior, Jacq. ... „ 238
fulvus, Sm. ... „ 238
geniculatus, *Linn.* ... „ 239
geniculatus, Poll. ... „ 238
himalaicus, *Hk. f.* ... „ 238
? *hordeiformis*, Linn. ... „ 85
indicus, Heyne ... „ 83
indicus, Linn. ... „ 82
monspeliensis, Linn. ... „ 245
muticus, Kar. & Kir. ... „ 238
myosuroides, Huds. ... „ 239
navicularis, Ham. ... „ 239

Alopecurus ... Vol. Page
nepalensis, *Trin.* ... vii. 239
nigrescens, Jacq. ... „ 238
nigricans, Hornem. ... „ 238
otiporensis, Griff. ... „ 221
paludosus, Beauv. ... „ 238
paniceus, Linn. ... „ 245
paniceus, O. Muell. ... „ 239
phalaroides, Schur. ... „ 238
pratensis, Aitch. ... „ 238
pratensis, Linn. ... „ 238
ramosus, Poir. ... „ 239
repens, Bieb. ... „ 238
rubicundus, Ham. ... „ 86
ruthenicus, Weinm. ... „ 238
sibiricus, Hort. ... „ 238
subaristatus, Pursh ... „ 238
typhoides, Burm. ... „ 82
ventricosus, Pers. ... „ 238
sp., Wall. ... „ 239
Alphonsea, *Hk. f. & T.* ... i. 88
elliptica, *Hk. f. & T.* ... „ 90
lutea, *Hk. f. & T.* ... „ 89
madraspatana, *Bedd.* ... „ 89
Maingayi, *Hk. f. & T.* ... „ 90
sclerocarpa, *Thw.* ... „ 89
ventricosa, *Hk. f. & T.* ... „ 89
zeylanica, *Hk. f. & T.* ... „ 89
Alpinia, *Linn.* ... vi. 252
alba, Rosc. ... „ 253
Allughas, *Rosc.* ... „ 253
aquatica, *Rosc.* ... „ 256
Asericea, Moon, vide *sericea* „ 256
aurantiaca, Wall. ... „ 255
bracteata, *Roxb.* ... „ 255
bracteata, Rosc. ... „ 254
calcarata, *Rosc.* ... „ 254
Cardamomum, Roxb. ... „ 251
Cardamomum-medium, Roxb. „ 235
carnea, Griff. ... „ 253
cernua, Sims ... „ 254
conchigera, *Griff.* ... „ 253
costata, Roxb. ... „ 235
cristata, Griff. ... „ 256
? decurvata, *Baker* ... „ 257
Galanga, *Sw.* ... „ 253
Galanga, Wall. ... „ 253
Hamiltoniana, Wall. ... „ 217
involucrata, *Griff.* ... „ 256
linguiformis, Roxb. ... „ 235
malaccensis, *Rosc.* ... „ 255
malaccensis, Wall. ... „ 256
Manii, *King* ... „ 253
? *Missionis*, Wall. ... „ 202
mutica, *Roxb.* ... „ 254
Neesiana, Grah. ... „ 247
Nimmonii, Grah. ... „ 244
nutans, *Rosc.* ... „ 256

Alpinia Vol. Page
petiolata, *Baker* ... vi. 255
Rafflesiana, *Wall.* ... ,, 255
Rheedii, Wight ... ,, 254
Roxburghii, Sweet ... ,, 255
scabra, *Benth.* ... ,, 256
? **secunda**, *Baker* ... ,, 257
sericea, Moon, lapsu *Asericea* ... ,, 256
sessilis, Koen. ... ,, 219
viridiflora, Griff. ... ,, 253
Wrayi, *King* ... ,, 254
zingiberina, Hk. f. ... ,, 253
Alseodaphne, *Nees* ... v. 143
? **costalis**, *Nees* ... ,, 146
crassipes, *Hk. f.* ... ,, 146
decipiens, *Hk. f.* ... ,, 145
? **grandis**, *Nees* ... ,, 146
? *grandis*, Nees ... ,, 143
grandis, Kurz ... ,, 125
? **lucida**, *Nees* ... ,, 147
panduriformis, *Hk. f.* ... ,, 145
peduncularis, *Hk. f.* ... ,, 144
petiolaris, *Hk. f.* ... ,, 145
semecarpifolia, *Nees* ... ,, 144
umbelliflora, *Hk. f.* ... ,, 145
Alsine, Burm. ... ii. 664
Meyeri, Boiss. ... i. 236
Roylei, Fenzl ... ,, 236
ALSINEÆ ... i. 213
Alsinella Wallichiana, Benth. i. 230
Alsodeia, *Thouars* ... i. 186
bengalensis, *Wall.* ... ,, 186
Brownii, Korth. ... ,, 187
dasycaula, Miq. ... ,, 188
echinocarpa, *Korth.* ... ,, 188
Griffithii, *Hk. f. & T.* ... ,, 187
lanceolata, *Hk. f. & T.* ... ,, 188
macrophylla, Dcne ... ,, 187
Maingayi, *Hk. f. & T.* ... ,, 188
mollis, *Hk. f. & T.* ... ,, 188
obtusa, Korth. ... ,, 187
racemosa, *Hk. f. & T.* ... ,, 187
Roxburghii, *Hk. f. & T.* ... ,, 186
virgata, *Hk. f. & T.* ... ,, 189
Wallichiana, *Hk. f. & T.* ... ,, 187
zeylanica, *Thw.* ... ,, 187
ALSODEIEÆ ... i. 182
Alsomitra, *Benth. & Hk. f.* ... ii. 634
clavigera, *Hk. f.* ... ,, 634
sarcophylla, *Hk. f.* ... ,, 634
Alstonia, *Br.* ... iii. 641
angustifolia, *Wall.* ... ,, 643
costata, Wall. ... ,, 643
? *costulata*, Miq. ... ,, 644
cuneata, Wall. ... ,, 642
grandifolia, *Miq.* ... ,, 643
Kurzii, *Hk. f.* ... ,, 643

Alstonia Vol. Page
lucida, D. Don ... iii. 667
macrophylla, *Wall.* ... ,, 643
neriifolia, *D. Don* ... ,, 642
scholaris, *Br.* ... ,, 642
spathulata, *Bl.* ... ,, 642
spectabilis, Kurz ... ,, 643
venenatus, *Br.* ... ,, 642
Alternanthera, *Forsk.* ... iv. 731
denticulata, Benth. ... ,, 732
denticulata, Br. ... ,, 732
denticulata, Wall. ... ,, 731
nodiflora, *Br.* ... ,, 732
prostrata, D. Don ... ,, 731
sessilis, *Br.* ... ,, 731
Althæa, *Linn.* ... i. 319
chinensis, Wall. ... ,, 319
coromandelina, Cav. ... ,, 319
Ludwigii, *Linn.* ... ,, 319
officinalis, *Linn.* ... ,, 319
rosea, Linn. ... ,, 319
taurinensis, DC. ... ,, 319
Altingia, *Noronha* ... ii. 429
excelsa, *Noronha* ... ,, 429
Alwisia tenuis, Lindl. ... v. 788
Alysicarpus, *Neck.* ... ii. 157
belgaumensis, *Wight* ... ,, 160
bupleurifolius, *DC.* ... ,, 158
bupleurifolius, Roxb. ... ,, 159
bupleurifolius, Wall. ... ,, 159
diversifolius, Wall. ... ,, 158
glaber, E. Meyer ... ,, 159
glumaceus, Wall. ... ,, 159
gracilis, Edgew. ... ,, 158
hamosus, *Edgew.* ... ,, 157
Harnieri, Schweinf. ... ,, 158
heterophyllus, Benth. ... ,, 158
Heyneanus, W. & A. ... ,, 159
Hochstetteri, A. Rich. ... ,, 159
longifolius, *W. & A.* ... ,, 159
ludens, Wall. ... ii. 158, 159
lupulinus, Stocks ... ii. 159
monilifer, *DC.* ... ,, 157
nummularifolius, DC. ... ,, 158
obovatus, Edgew. ... ,, 159
parviflorus, Dalz. ... ,, 172
pilifer, Wall. ... ,, 159
pubescens, *Law* ... ,, 160
quadrangularis, Edgew. ... ,, 159
racemosus, Benth. ... ,, 160
rotundifolius, Dalz. ... ,, 172
rotundifolius, Wight ... ,, 157
Rubibarna, Wall. ... ii. 157, 158
rugosus, *DC.* ... ii. 159
scariosus, Grah. ... ,, 159
spicatus, Royle ... ,, 159
styracifolius, DC. ... ,, 159
styracifolius, Wall. ... ,, 159

Alysicarpus Vol. Page
tetragonolobus, *Edgew.* ... ii. 159
trifoliatus, Stocks ... „ 158
vaginalis, *DC.* ... „ 158
vaginalis, Wall. ... „ 159
varius, Wall. ... „ 159
Wallichii, W. & A. ... „ 159
ALYSSINEÆ ... i. 129
Alyssum, *Linn.* ... i. 141
canescens, DC. ... „ 141
cochlearioides, Roth ... „ 145
maritimum, Lam. ... „ 141
minimum, *Willd.* ... „ 141
tenuifolium, DC. ... „ 141
Alytostylis, Hk. f. ... i. 409
Alyxia, *Br.* ... iii. 634
? *calophylla*, Wall. ... „ 630
ceylanica, *Wight* ... „ 636
coriacea, *Wall.* ... „ 635
? *cuspidata*, Wall. ... „ 629
fascicularis, *Benth.* ... „ 636
glaucescens, G. Don ... „ 630
gracilis, *Benth.* ... „ 634
Gynopogon, Wall. ... „ 635
lucida, *Wall.* ... „ 635
odorata, *Wall.* ... „ 636
pilosa, *Miq.* ... „ 635
pumila, *Hk. f.* ... „ 635
stellata, *R. & S.* ... „ 636
Amanoa acuminata, Bedd. ... v. 276
chartacea, Baill. ... „ 275
collina, Baill. ... „ 274
ferruginea, Thw. ... „ 280
indica, Thw. ... „ 279
indica, Wight ... „ 279
pallida, Thw. ... „ 279
patula, Thw. ... „ 279
tomentosa, Baill. ... „ 271
AMARANTACEÆ ... iv. 713
AMARANTEÆ ... iv. 713
Amarantus, *Linn.* ... iv. 718
acroglochin, Spreng. ... v. 3
adscendens, Hort. Petrop. iv. 721
adscendens, Rchb. ... „ 721
alopecurus, Hochst. ... „ 719
amboinicus, Hb. Ham. ... „ 720
Anacardana, Ham. ... „ 719
angustifolius, Roxb. ... „ 722
arctioideus, Perrott. ... „ 724
atropurpureus, Roxb. ... „ 722
Blitum, *Linn.* ... „ 721
Blitum, Hb. Fries. ... „ 721
Blitum, Maxim ... „ 721
campestris, *Willd.* ... „ 722
Caturus, *Heyne* ... „ 720
caudatus, *Linn.* ... „ 719
caudatus, Hochst. ... „ 719
cauliflorus, Link ... v. 3
Amaranthus Vol. Page
cruentus, Willd. ... iv. 719
diandrus, Spreng. ... v. 3
farinaceus, Hb. Roxb. ... iv. 719
fasciatus, Roxb. ... „ 720
flavus, Linn. ... „ 719
frumentaceus, Ham. ... „ 719
gangeticus, *Linn.* ... „ 719
gangeticus, Wall. ... „ 721
græcizans, Linn. ... „ 722
inamœnus, Wall. ... „ 720
inamoenus, Willd. ... „ 720
lanceolatus, Roxb. ... „ 719
lividus, Hort. Petrop. ... „ 721
lividus, Roxb. ... „ 720
mangostanus, *Linn.* ... „ 720
melancholicus, Linn. ... „ 720
miniatus, Hort. Avign. ... „ 721
minutus, Leschen. ... „ 726
mucronatus, Hort. Petrop. „ 720
oleraceus, Linn. ... „ 721
oleraceus, Roxb. ... „ 719
paniculatus, *Linn.* ... „ 718
paniculatus, Wall. ... „ 719
persicarioides, Poir. ... v. 3
persicarioides, Spreng. ... „ 3
polygamus, *Linn.* ... iv. 721
polygamus, Roxb. ... „ 720
polygamus, Thw. ... „ 720
polygamus, Wall. ... „ 721
polygonoides, Roxb. ... „ 721
polystachyus, Ham. ... „ 720
rubricaulis, Page ... „ 722
sanguineus, Linn. ... „ 719
speciosus, Sims ... „ 719
spinosus, *Linn.* ... „ 718
strictus, Willd. ... „ 719
sylvestris, Desf. ... „ 721
tenuifolius, *Willd.* ... „ 722
tenuifolius, Wall. ... „ 721
tricolor, Linn. ... „ 719
tristis, Hb. Rottl. & Heyne „ 720
tristis, Linn. ... „ 719
tristis, Wall. ... iv. 720, 721
viridis, *Linn.* ... iv. 720
viridis, Linn. ... v. 3
AMARYLLÆ ... vi. 277
AMARYLLIDEÆ ... vi. 277
Amaryllis carnosa, Ham. ... vi. 280
cænosa, Ham. ... „ 281
insignis, Ker. ... „ 283
latifolia, L'Her. ... „ 283
lineata, Lamk. ... „ 284
ornata, Ker ... vi. 283, 284
vivipara, Lamk. ... vi. 281
zeylanica, Linn. ... „ 283
Amberboa Goniocaulon, DC. iii. 377
indica, DC. ... „ 377

Vol. Page
Amblogyna polygonoides, Dalz. & Gibs. ... iv. 721
Amblyachyrum mangalorense, Hochst. ... vii. 142
Amblyanthus, *A. DC.* ... iii. 533
glandulosus, *A. DC.* ... „ 533
Amblychloa dura, Link ... vii. 335
Amblyglottis angustifolia, Bl. ... v. 854
emarginata, Bl. ... „ 851
? *flava*, Bl. ... „ 851
pulchra, Bl. ... „ 854
veratrifolia, Bl. ... „ 851
Ambrina (*Ambrosia*) *Botrys*, Moq. ... v. 4
Ambrosinia ciliata, Roxb. ... vi. 492
retrospiralis, Roxb. ... „ 493
spiralis, Roxb. ... „ 494
unilocularis, Wight ... „ 494
Ambulia aromatica, Lamk. ... iv. 268
ebracteata, Ham. ... „ 268
Ameletia acutidens, Miq. ... ii. 566
elongata, Bl. ... „ 566
floribunda, Wight ... „ 567
indica, DC. ... „ 566
polystachya, Wall. ... „ 566
rotundifolia, Dalz. & Gibs. ... „ 567
subspicata, Benth. ... „ 567
tenuis, Wight ... „ 567
Amelina Wallichii, Clarke ... vi. 383
Amentacea, Wall. ... v. 626
Amerimnum fasciculatum, Ham. ... ii. 109
obovatum, Ham. ... „ 246
pallidum, Ham. ... „ 108
secundum, Ham. ... „ 247
Amherstia, *Wall.* ... ii. 272
nobilis, *Wall.* ... „ 272
AMHERSTIEÆ ... ii. 61
Amischotolypa glabrata, Hassk. ... vi. 384
marginata, Hassk. ... „ 383
mollissima, Hassk. ... „ 383
Ammanella linearis, Miq. ... ii. 571
Ammannia, *Linn.* ... ii. 566
auriculata, Willd. ... „ 570
baccifera, *Linn.* ... „ 569
cordata, *W. & A.* ... „ 570
debilis, *Ait.* ... „ 569
densiflora, Miq. ... „ 569
densiflora, Roth ... „ 568
dentelloides, *Kurz* ... „ 568
egyptiaca, Willd. ... „ 569
fimbriata, Wight ... „ 569
floribunda, *Clarke* ... „ 567
glauca, Wall. ... „ 569
hexandra, Wall. ... „ 569
Heyneana, Wall. ... „ 569

Ammania Vol. Page
indica, Lamk. ... ii. 569
lanceolata, *Heyne* ... „ 570
latifolia, Linn. ... „ 571
latifolia, Wall. ... ii. 566, 567
microcarpa, DC. ... ii. 571
multiflora, *Roxb.* ... „ 570
nana, Roxb. ... ii. 566, 568
nana, Wall. ... ii. 569
octandra, *Linn. f.* ... „ 571
pentandra, *Roxb.* ... „ 568
peploides, *Spreng.* ... „ 566
pygmæa, *Kurz* ... „ 568
repens, Rottl. ... „ 566
Ritchiei, *Clarke* ... „ 566
Rotala, *F. Muell.* ... „ 567
rotundifolia, *Ham.* ... „ 566
rubra, Ham. ... „ 568
salicifolia, *Monti* ... „ 569
senegalensis, *Lamk.* ... „ 570
simpliciuscula, *Kurz* ... „ 568
subrotunda, *Wall.* ... „ 571
subspicata, Benth. ... „ 567
subspicata, Hohen. ... „ 568
tenuis, *Clarke* ... „ 567
verticillata, Boiss. ... „ 569
verticillata, Lamk. ... „ 569
verticillata, W. & A. ... „ 570
vesicatoria, Roxb. ... „ 569
Wallichii, Kurz ... „ 572
AMMANNIEÆ ... ii. 565
Ammi copticum, Boiss. ... ii. 682
daucifolium, Wall. ... „ 693
AMMINEÆ ... ii. 665
Amomum, *Linn.* ... vi. 233
aculeatum, *Roxb.* ... „ 242
acuminatum, *Thw.* ... „ 237
araneosum, *Baker* ... „ 234
aromaticum, *Roxb.* ... „ 241
Benthamianum, *Trim.* ... „ 242
biflorum, *Jack* ... „ 240
cannæcarpum, *Benth.* ... „ 240
Cardamomum, Linn. ... „ 251
ciliatum, *Baker* ... „ 238
corynostachyum, *Wall.* ... „ 238
costatum, *Benth.* ... „ 235
Curcuma, Jacq. ... „ 214
dealbatum, *Roxb.* ... „ 239
echinatum, *Willd.* ... „ 242
eletteriodes, *Baker* ... „ 240
Fenzlii, *Kurz* ... „ 234
floribundum, *Benth.* ... „ 233
fulviceps, *Thw.* ... „ 237
gomphocheilos, *Baker* ... „ 236
gramineum, *Wall.* ... „ 233
graminifolium, *Thw.* ... „ 238
hypoleucum, *Thw.* ... „ 240
involucratum, *Benth.* ... „ 233

Amomum ... Vol. Page
Kingii, *Baker* ... vi. 241
Kœnigii, *Baker* ... „ 237
latifolium, Lamk. ... „ 211
Leonurus, *Kœn.* ... „ 236
linguiforme, *Benth.* ... „ 235
littorale, *Kœn.* ... „ 239
macrocheilos, *Baker* ... „ 235
macrodus, *Scort.* ... „ 236
macrostephanum, *Baker* „ 243
Maingayi, *Baker* ... „ 235
masticatorium, *Thw.* ... „ 238
maximum, Roxb. ... „ 239
megalocheilos, *Baker* ... „ 236
metriocheilos, *Baker* ... „ 234
microstephanum, *Baker* ... „ 239
montanum, Kœn. ... „ 248
nemorale, *Benth.* ... „ 233
pauciflorum, *Baker* ... „ 238
pterocarpum, *Thw.* ... „ 241
pulchellum, Thw. ... „ 251
racemosum, Lam. ... „ 251
repens, Willd. ... „ 251
roseum, Roxb. ... „ 244
rubro-luteum, *Baker* ... „ 236
rufescens, *Benth.* ... „ 242
scyphiferum, *Kœn.* ... „ 237
sericeum, Roxb. ... „ 239
sphærocephalum, *Baker* ... „ 234
spurium, Gmel. ... „ 247
stenoglossum, *Baker* ... „ 234
subulatum, *Roxb.* ... „ 240
sylvestre, Poir. ... „ 247
triorgyale, *Baker* ... „ 237
uliginosum, *Kœn.* ... „ 241
vitellinum, *Lindl.* ... „ 242
xanthioides, *Wall.* ... „ 239
xanthophlebium, *Baker* ... „ 241
Zedoaria, Berg. ... „ 211
Zerumbet, Linn. ... „ 247
Zerumbeth, Kœn. ... „ 211
Zingiber, Linn. ... „ 246
sp., *Griff.* ... „ 240
Sp., *Kœn.* ... „ 237
Amoora, *Roxb.* ... i. 559
? *auriculata*, Miq. ... „ 560
canarana, *Benth. & Hk. f.* „ 560
? Championii, *Benth. & Hk. f.* ... „ 562
chittagonga, *Hiern* ... „ 559
cucullata, *Roxb.* ... „ 560
decandra, *Hiern* ... „ 562
ficiformis, Wight ... „ 546
lanceolata, *Hiern* ... „ 560
Lawii, *Benth. & Hk. f.* ... „ 561
macrophylla, Nimmo ... „ 559
Maingayi, *Hiern* ... „ 562
Rohituka, *W. & A.* ... „ 559

Amoora ... Vol. Page
rubescens, *Hiern* ... i. 561
rubiginosa, *Hiern* ... „ 561
spectabilis, *Miq.* ... „ 561
Amorphophallus, *Bl.* ... vi. 513
bulbifer, *Bl.* ... „ 515
burmanicus, *Hk. f.* ... „ 517
campanulatus, *Bl.* ... „ 513
campanulatus, Bl. ... „ 514
Chatty, André ... „ 513
chlorospathus, *Kurz* ... „ 516
commutatus, *Engl.* ... „ 515
dubius, *Bl.* ... „ 514
elatus, *Hk. f.* ... „ 517
giganteus, Bl. ... „ 517
hæmatospadix, *Hk. f.* ... „ 517
longistylus, *Kurz* ... „ 515
lyratus, Engl. ... „ 517
margaritiferus, Kunth ... „ 519
oncophyllus, *Prain* ... „ 516
Prainii, *Hk. f.* ... „ 516
purpurascens, *Kurz* ... „ 515
Rex, *Prain* ... „ 514
sparsiflorus, *Hk. f.* ... „ 516
sylvaticus, Kunth ... „ 518
tuberculiger, *Engl.* ... „ 517
variabilis, Bl. ... „ 517
virosus, N. E. Br. ... „ 513
zeylanicus, Bl. ... „ 518
Ampacus angustifolius, Rumph. ... i. 488
AMPELIDEÆ ... i. 644
Ampelopsis himalayana, Royle i. 656
? *ternata*, DC. ... „ 650
Ampelygonum chinense, Lindl. v. 45
Amphicarpæa, *Elliott* ... ii. 181
Edgeworthii, *Benth.* ... „ 181
ferruginea, Benth. ... „ 182
monoica ... „ 181
Amphicome, *Lindl.* ... iv. 385
arguta, *Lindl.* ... „ 385
Emodi, *Lindl.* ... „ 385
Amphidonax bengalensis, Nees ... vii. 303
bifaria, Nees ... „ 303
Heynii, Nees ... „ 270
obtusiflora, Thw. ... „ 270
tenella, W. & A. ... „ 270
Amphilophis, Trin. ... vii. 171
Amphipogon humilis, Ham. vii. 284
Amphiraphis albescens, DC. iii. 257
cuspidata. DC. ... „ 296
heterotricha, DC. ... „ 295
indica, Less. ... „ 227
leiocarpa, Benth. ... „ 245
mollis, Wall. ... „ 227
peduncularis, DC. ... „ 253
pubescens, DC. ... „ 245

Amphiraphis Vol. Page
  rubricaulis, DC. ... iii. 296
  Wightiana, Wall. ... „ 301
  zeylanica, DC. ... „ 257
Amydrium humile, lapsu *Anadryum*, Schott ... vi. 549
Amygdalus collinus, Wall. ... ii. 313
  communis, Linn. ... „ 313
  humilis, Edgew. ... „ 314
  persica, Linn. ... „ 313
Amyris acuminata, Roxb. ... i. 530
  ? *Agallocha*, Roxb. ... „ 529
  Commiphora, Roxb. ... „ 529
  dentata, Willd. ... „ 506
  gileadensis, Roxb. ... „ 530
  heptaphylla, Roxb. ... „ 504
  nana, Roxb. ... „ 506
  pentaphylla, Roxb. ... „ 504
  punctata, Roxb. ... „ 505
  serratifolia, Rottl. ... „ 529
  simplicifolia, Roxb. ... „ 513
  suffruticosa, Roxb. ... „ 506
  sumatrana, Roxb. ... „ 505
  zeylanica, Retz. ... „ 532
Anabasis, *Linn.* ... v. 18
  glomerata, M. Bieb. ... „ 20
  intermedia, Moq. ... „ 19
  multiflora, Moq. ... „ 16
  phyllophora, *Kar. & Kir.* „ 18
  setifera, *Moq.* ... „ 19
  subulifolia, Schr. ... „ 19
ANACARDIACEÆ ... ii. 7
ANACARDIEÆ ... ii. 7
Anacardium, *Rottb.* ... ii. 20
  latifolium, Lamk. ... „ 31
  occidentale, *Linn.* ... „ 20
  officinarum, Gærtn. ... „ 31
Anacolosa, *Bl.* ... i. 580
  densiflora, *Bedd.* ... „ 580
  Griffithii, *Mast.* ... „ 580
  ? heptandra, *Maing.* ... „ 581
  ilicoides, *Mast.* ... „ 580
  Maingayi, *Mast.* ... „ 580
  puberula, *Kurz* ... „ 581
Anacyclus aureus, Lamk. ... iii. 317
Anadendrum, *Schott* ... vi. 539
  latifolium, *Hk. f.* ... „ 540
  marginatum, *Schott* ... „ 540
  medium, *Schott* ... „ 540
  montanum, *Schott* ... „ 540
Anadryum, vide *Amydrium* . „ 549
Anæctochilus, *Bl.* ... vi. 94, 179
  albolineatus, Par. & Rchb.f. vi. 96
  brevilabris, *Lindl.* ... „ 95
  crispus, Lindl. ... „ 99
  Dawsonianus, Low ... „ 102
  elatus (elatior), *Lindl.* ... „ 95
  grandiflorus, Lindl. ... „ 100

Anæctochilus Vol. Page
  Griffithii, *Hk. f.* ... vi. 96
  lanceolatus, Lindl. ... „ 101
  luteus, Lindl. ... „ 101
  regalis, *Bl.* ... „ 95
  Reinwardtii, *Bl.* ... „ 95
  Roxburghii, *Lindl.* ... „ 95
  setaceus, Lindl. ... „ 95
  tetrapterus, *Hk. f.* ... „ 96
Anagallis, *Tournef.* ... iii. 505
  arvensis, *Linn.* ... „ 506
  cærulea, Lam. ... „ 506
  multangularis, Ham. ... „ 503
Anagyris barbata, Grah. ... ii. 62
  indica, Lindl. ... „ 62
  nepalensis, Grah. ... „ 62
Anamirta, *Colebr.* ... i. 98
  Cocculus, *W. & A.* ... „ 98
  flavescens, Miers ... „ 98
  paniculata, Colebr. ... „ 98
  toxifera, Miers ... „ 98
Anandria Bellidiastrum, DC. iii. 390
Anaphalis, *DC.* ... iii. 279
  adnata, *DC.* ... „ 282
  araneosa, *DC.* ... „ 283
  aristata, *DC.* ... „ 285
  Beddomei, *Hk. f.* ... iii. 282, 290
  brevifolia, *DC.* ... iii. 286
  chionantha, Hk. f. & T. ... „ 280
  cinnamomea, *Clarke* ... „ 281
  contorta, *Hk. f.* ... „ 284
  cuneifolia, *Hk. f.* ... „ 280
  ? cutchica, *Clarke* ... „ 284
  ? *elliptica*, DC. ... „ 283
  Falconeri, Clarke ... „ 285
  fruticosa, *Hk. f.* ... „ 282
  Griffithii, *Hk. f.* ... „ 280
  Hookeri, *Clarke* ... „ 282
  leptophylla, *DC.* ... „ 285
  linearis, DC. ? ... „ 286
  marcescens, *Clarke* ... „ 286
  margaritacea ... „ 282
  monocephala, DC. ... „ 280
  mucronata, Clarke ... „ 280
  mucronata, DC. ... „ 280
  neelgerriana, *DC.* ... „ 287
  Notoniana, *DC.* ... „ 284
  nubigena, *DC.* ... iii. 279, 280
  nubigena, Clarke ... iii. 280
  oblonga, *DC.* ... „ 283
  polylepis, Clarke ... „ 280
  polylepis, DC. ... „ 280
  Royleana, *DC.* ... „ 280
  Royleana, Clarke ... „ 280
  ? *Royleana*, Hk. f. & T. ... „ 280
  Stoliczkai, *Clarke* ... „ 283
  subumbellata, *Clarke* ... „ 281
  tenella, DC. ... „ 285

Anaphalis — Vol. Page
Thwaitesii, *Clarke* ... iii. 284
triplinervis, *Clarke* ... ,, 281
virgata, *Thoms.* ... ,, 285
Wightiana, *DC.* ... ,, 286
Wightiana, Thw. ... ,, 286
xylorhiza, *Schultz* ... ,, 281
zeylanica, *Clarke* ... ,, 286
Anaphyllum, *Schott* ... vi. 551
Wightii, *Schott* ... ,, 551
Anarthrosyne cordata, Klotz. ii. 169
Anatherum caudatum, Schult. vii. 107
glabrum, Schult. ... ,, 176
muricatum, Beauv. ... ,, 186
parviflorum, Spreng. ... ,, 179
porto-ricense, Spreng. ... ,, 107
Anaua sumatrana, Miq. ... v. 338
Anauxanopetalum Schwenkii, Teysm. & Binn. ... ii. 27
Anaxagorea, *St. Hil.* ... i. 68
javanica, Bl. ... ,, 68
luzonensis, *A. Gray* ... ,, 68
sumatrana, Miq. ... ,, 51
zeylanica, Hk. f. & T. ... ,, 68
Anchusa, *Linn.* ... iv. 168
arvensis, Bieb. ... ,, 169
hispida, Forsk. ... ,, 168
italica, Retz. ... ,, 168
moltkioides, Benth. ... ,, 170
petiolata, Hook. ... ,, 158
pulla, Bieb. ... ,, 169
racemosa, DC. ... ,, 171
sempervirens, Linn. ... ,, 168
sikkimensis, *Clarke* ... ,, 168
tenella, Hornem. ... ,, 167
zeylanica, Jacq. f. ... ,, 167
Anchusopsis longiflora, Bisch. ,, 159
Ancistrocladus, *Wall.* ... i. 299
attenuatus, *Dyer* ... ,, 300
extensus, *Wall.* ... ,, 299
extensus, Wall.? ... ,, 300
Griffithii, *Planch.* ... ,, 300
Heyneanus, *Wall.* ... ,, 299
pinangianus, *Wall.* ... ,, 300
sagittatus, Wall. ... i. 300, 526
stelligerus, Wall. ... i. 300
Vahlii, *Arn.* ... ,, 299
Wallichii, *Planch.* ... ,, 300
Ancistrolobus brevipes, Turcz. i. 257
glaucescens, Turcz ... ,, 258
ligustrinus, Spach. ... ,, 257
sp., Griff. ... ,, 299
sp., Wight. ... ,, 257
Andersonia, Ham. ... ,,
acuminata, Herb. Rottl. ... ii. 451
altissima, Hb. Madr. ... ,, 450
lanceolata, Hb. Rottl. ... ,, 451
Andersonia, Roxb. ... ,,
Andersonia — Vol. Page
cucullata, Roxb. ... i. 560
Rohitoca, Griff. ... ,, 559
Rohituka, Roxb. ... ,, 559
Andira Horsfieldii, Lesch. ... ii. 248
Andrachne, *Linn.* ... v. 283
apetala, Roxb. ... ,, 345
aspera, *Spreng.* ... ,, 284
Cadishan, Roxb. ... ,, 275
chinensis, Bunge ... ,, 284
Clarkei, *Hk. f.* ... ,, 285
cordifolia, *Muell.* ... ,, 283
Decaisneana, Baill. ... ,, 284
Doonkyboisca, Heyne ... ,, 268
fruticosa, *Dcne.* ... ,, 284
fruticosa, Heyne ... ,, 287
orbiculata, Roth ... ,, 275
rotundifolia, C. A. Mey. ... ,, 284
telephioides, *Linn.* ... ,, 284
trifoliata, Roxb. ... ,, 345
Andrographis, *Wall.* ... iv. 501
affinis, Hook. ... ,, 505
alata, *Nees* ... ,, 502
Beddomei, *Clarke* ... ,, 506
ceylanica, Nees ... ,, 503
ceylanica, Wight ... ,, 504
echioides, *Nees* ... ,, 505
elongata, *T. Anders.* ... ,, 502
elongata, Nees ... ,, 502
glandulosa, *Nees* ... ,, 505
gracilis, Nees ... ,, 503
lineata, *Nees* ... ,, 504
lobelioides, *Wight* ... ,, 505
macrobotrys, *Nees* ... ,, 503
Neesiana, *Wight* ... ,, 504
Neesiana, Benth. ... ,, 504
ovata, *Benth.* ... ,, 502
paniculata, *Nees* ... ,, 501
Rothii, *Clarke* ... ,, 506
serpyllifolia, *Wight* ... ,, 506
stellulata, *Clarke* ... ,, 504
stenophylla, *Clarke* ... ,, 503
subspathulata, *Clarke* ... ,, 502
tenuiflora, *T. Anders.* ... ,, 502
viscosula, *Nees* ... ,, 504
Wightiana, *Arn.* ... ,, 503
Wightiana, T. Anders. ... ,, 503
sp., Hk. f. & T. ... iv. 504, 505
Androgyne sp., Griff. ... v. 783
Andromeda cupressiformis, Wall. ... iii. 459
elliptica, Sieb. & Zucc. ... ,, 460
fastigiata, Wall. ... ,, 459
flexuosa, Moon ... ,, 457
formosa, Wall. ... ,, 461
katagherensis, Hook. ... ,, 457
lanceolata, D. Don ... ,, 461
ovalifolia, Wall. ... ,, 460

Andromeda Vol. Page
squamulosa, D. Don ... iii. 461
symplocifolia, Wall. ... „ 455
villosa, Wall. ... ... „ 461
ANDROMEDEÆ ... ... iii. 456
Andropogon, *Linn.* ... ... vii. 164
acicularis, Willd. ... ... „ 188
aciculatus, *Retz.* ... ... „ 188
aciculatus, Wight ... ... „ 193
adscendens, Heyne ... ... „ 243
albidus, Heyne ... ... „ 108
Alectoridia, Steud. ... ... „ 146
Allionii, DC. ... ... „ 199
Alopecurus, Hack. ... ... „ 166
alternans, Presl ... ... „ 179
amplexifolius, Trin. ... ... „ 146
angustifolius, Parl. ... ... „ 173
angustifolius, Sibth. & Sm. „ 171
annulatus, *Forsk.* ... ... „ 196
annulatus, Heyne ... ... „ 172
annulatus, F. Schmt. ... „ 171
apricus, *Trin.* ... ... „ 169
aristulatus, Hochst. ... „ 191
armatus, *Hk. f.* ... ... „ 197
Arnottianus, Nees ... ... „ 174
Arnottianus, Steud. ... ... „ 128
aromaticus, Sieb. ... ... „ 205
Arriani, Edgew. ... ... „ 203
arundinaceus, Heyne ... „ 243
arundinaceus, Scop. ... „ 182
ascinodis, Clarke ... ... „ 169
asper, *Heyne* ... ... „ 189
assimilis, *Steud.* ... ... „ 179
Asthenos, Steud. ... .. „ 136
asthenostachys, Steud. ... „ 109
Aucheri, *Boiss.* ... ... „ 195
aureo-fulvus, Steud. ... „ 114
australis, Poir. ... ... „ 196
avenaceus, H. B. K. ... „ 182
axilis, *Hochst.* ... ... „ 166
barbatus, Ham. ... ... „ 196
barbatus, Linn. ... ... „ 292
barbigerus, Steud. ... ... „ 127
Barteri, Hack. ... ... „ 210
Beckettii, Thw. ... ... „ 244
Bellardi, Bieb. ... ... „ 199
bellariensis, *Hack.* ... ... „ 201
besukiensis, Steud. ... ... „ 199
biaristatus, Steud. ... ... „ 116
? *bicolor*, Kunth ... ... „ 184
? *bicornis*, Forsk. ... ... „ 205
bifidus, Steud. ... ... „ 134
bifoveolatus, Steud. ... ... „ 174
binatus, Retz. ... ... „ 129
binatus, Roxb. ... ... „ 196
Bladhii, Retz. ... ... „ 196
bootanenis, *Hk. f.* ... ... „ 166
breviaristatus, Steud. ... „ 191

Andropogon Vol. Page
brevifolius, Sw. ... ... vii. 165
Brownii, Kunth ... ... „ 136
brunneus, Heyne ... vii. 109, 112
cæsius, Nees ... vii. 170, 205, 206
capillaceus, Wall. ... ... vii. 179
capillaris, Heyne ... ... „ 75
capilliflorus, Steud. ... ... „ 179
cariosus, *Linn.* ... ... „ 196
castratus, Griff. ... ... „ 144
caucasicus, Trin. ... ... „ 176
cernuus, Kunth ... ... „ 184
? *cernuus*, Roxb. ... ... „ 184
ciliolatus, Steud. ... ... „ 193
circinnatus, Hochst. & Steud. ... ... „ 203
citratus, DC. ... ... „ 210
clandestinus, Nees ... ... „ 205
Clarkei, *Hack.* ... ... „ 197
cœruleus, Steud. ... ... „ 193
cœrulescens, Kunth ... ... „ 179
coloratus, Nees ... ... „ 207
commutatus, Aitch. ... ... „ 203
? *comorensis*, Steud. ... ... „ 134
comosus, Link ... ... „ 196
compactus, Brot. ... ... „ 184
compressus, *Hk. f.* ... ... „ 172
concanensis, *Hk. f.* ... ... „ 174
confertiflorus, Steud. ... „ 206
conjugatus, Roxb. ... ... „ 112
connatus, Hochst. ... ... „ 205
consimilis, Steud. ... ... „ 185
contortus, *Linn.* ... ... „ 199
controversus, Steud. ... „ 182
cordatifolius, Steud. ... „ 131
corollatus, Steud. ... ... „ 139
cotulifer, Thunb. ... ... „ 108
crinitus, Thunb. ... ... „ 141
curvatus, Russ. ... ... „ 196
cuspidatus, Hochst. ... ... „ 146
Cymbachne, Hack. ... ... „ 210
Cymbarius, Linn. ... ... „ 210
dactyloides, Steud. ... ... „ 210
debilis, Kunth ... ... „ 165
demissus, Steud. ... ... „ 170
depauperatus, Kunth ... „ 210
diatherus, Hochst. ... ... „ 167
dichroanthus, Steud. ... „ 185
distans, *Nees* ... ... „ 207
distans, Thw. ... ... vii. 206, 208
distichopyllus, *Hk. f.* ... vii. 191
diversiflorus, Steud. ... ... „ 210
dubitatus, Steud. ... ... „ 182
echinatus, Heyne ... ... „ 143
echinulatus, Steud. ... ... „ 188
elatus, Steud. ... ... „ 127
elegantissimus, Steud. ... „ 161
ensiformis, *Hk. f.* ... ... „ 175

Andropogon Vol. Page
?*epiphyllus*, Wall. ... ... vii. 73
eriophorus, Willd. ... ... „ 203
Esenbeckii, Steud. ... ... „ 127
excavatus, Hochst. ... ... „ 205
familiaris, Steud. ... ... „ 210
fascicularis, *Roxb.* ... ... „ 177
fascicularis, Thw. ... ... „ 176
fasciculatus, Linn. ... ... „ 116
fastigiatus, *Sw.* ... vii. 167, 422
festucoides, Presl ... ... vii. 186
filiculmis, *Hk. f.* ... ... „ 181
filiformis, Pers.... ... ... „ 196
filiformis, Roxb. ... ... „ 104
filipendulus, *Hochst.* ... „ 209
finitimus, Hochst. ... ... „ 209
flabelliformis, Roxb. ... „ 210
flaccidus, A. Rich. ... ... „ 165
flexuosus, Nees.... ... ... „ 207
floridus, Trin. ... ... „ 165
foliatus, Steud.... ... ... „ 205
Foulkesii, *Hk. f.* ... ... „ 174
foveolatus, *Del.* ... ... „ 168
fragilis, Br. ... ... „ 165
fragilissimus, Hochst. ... „ 166
fragillimus, Steud. ... ... „ 166
fulvus, Spreng. ... ... „ 210
fuscus, Presl ... ... „ 185
gangeticus, Hack. ... ... „ 178
garipensis, Steud. ... ... „ 196
geminatus, Hb. Russ. ... „ 170
geniculatus, Steud. ... ... „ 127
genuinus, Hack. ... ... „ 204
Gidarba, *Ham.*... ... ... „ 208
giganteus, Hochst. ... ... „ 204
glaber, Roxb. ... ... „ 176
glabratus, Steud. ... ... „ 188
glaucopsis, Steud. ... ... „ 179
glaucus, Retz. ... ... „ 150
Grayia, Steud.... ... ... „ 246
Griffithii, Munro ... ... „ 209
Griffithsiæ, Steud. ... ... „ 128
Grisebachii, Steud. ... ... „ 161
Gryllus, *Linn.*... ... ... „ 187
Hackelii, *Hk. f.* ... ... „ 194
Haenkii, Presl ... ... „ 176
halepensis, *Brot.* ... ... „ 182
halepensis, Wight ... ... „ 183
Hamiltoni, *Hk. f.* ... ... „ 190
heteroclitus, Nees ... ... „ 219
hexastachyus, Steud. ... „ 112
himalayensis, Steud. ... „ 142
hirsutus, Heyne ... ... „ 70
hirtiflorus, *Kunth* ... ... „ 167
hirtus, Heyne ... ... „ 170
hispidus, Willd. ... ... „ 73
Hochstetteri, Steud.... ... „ 167
Hookeri, *Munro* ... ... „ 209

Andropogon Vol. Page
Hugelii, *Hack.* ... ... vii. 180
humilis, Wight... ... ... „ 170
imberbis, Steud. ... ... „ 127
impressus, *Hack.* ... ... „ 166
incertus, Steud... ... vii. 134, 146
increscens, Steud. ... ... vii. 193
incurvatus, Kœn. ... ... „ 196
incurvatus, Retz. ... ... „ 149
inscalptus, Anderss. ... „ 136
insculptus, A. Rich... ... „ 174
intermedius, *Br.* ... ... „ 175
involutus, Steud. ... ... „ 129
Ischæmum, *Linn.* ... ... „ 171
Ischæmum, Roxb. ... vii. 172, 196
ischynanthus, Steud. ... vii. 200
Iwarancusa, *Jones* ... ... „ 203
Iwarancusa, Boiss. ... ... „ 205
javanicus, Steud. ... ... „ 188
khasianus, Munro ... ... „ 206
Kœnigii, Steud. ... ... „ 196
koretrostachys, Trin... ... „ 109
Kuntzeanus, *Hack.* ... ... „ 175
lachnatherus, Benth. ... „ 209
lancearius, *Hk. f.* ... ... „ 190
lanceolatus, Baker ... ... „ 146
lanceolatus, Roxb. ... ... „ 144
lancifolius, Trin. ... ... „ 147
laniger, Desf. ... ... „ 203
lasiocoleos, Steud. ... ... „ 146
Lawsoni, *Hk. f.* ... ... „ 187
laxus, Roxb. ... ... „ 182
laxus, Willd. ... ... „ 185
leptanthus, Steud. ... ... „ 176
Leschenaultianus, Dcne. „ 114
liananthus, Steud. ... ... „ 200
lineatus, Steud. ... ... „ 136
lividus, *Thw.* ... ... „ 209
longipes, *Hack*... ... ... „ 170
Macraei, Steud. ... ... „ 134
macrostachyus, Anderss.... „ 136
malacophyllus, Hochst. ... „ 134
Martini, Benth. ... ... „ 205
Martini, Roxb.... ... ... „ 204
Martini, Str. & Wint. ... „ 207
Martini, Thw. ... ... „ 206
melanocarpus, *Ell.* ... ... „ 200
messanensis, Biv. ... ... „ 199
micans, Steud.... ... ... „ 146
micranthus, *Kunth* ... ... „ 178
microphyllus, Trin.... ... „ 147
microtheca, *Hk. f.* ... ... „ 208
miliaceus, Roxb. ... ... „ 182
miliformis, Schult. ... ... „ 182
minor, Hochst.... ... ... „ 147
minutiflorus, Steud... ... „ 112
minutissimus, Heyne vii. 147, 244
molle, Duthie ... ... vii. 147

Andropogon Vol. Page
mollicomus, Kunth ... ... vii. 196
monandrus, Roxb. ... ... „ 141
monomeros, Hochst.... ... „ 219
monostachyus, Spreng. ... „ 168
monostachyus, Steud. ... „ 127
montanus, *Roxb.* ... ... „ 176
montanus, Benth. ... ... „ 179
montanus, Kœn. ... ... „ 193
monticola, *Schult.* ... ... „ 192
mucronatus, *Anderss.* ... „ 198
multicaulis, Steud.... ... „ 147
Munroi, Clarke... ... ... „ 171
muralis, Ham. ... ... „ 147
muricatus, Retz. ... ... „ 186
murinus, Steud. ... ... „ 135
muticus, Steud. ... ... „ 133
nardoides, Nees ... vii. 204, 205
Nardus, *Linn.* ... ... vii. 205
Nardus, Bentl. & Trim. ... „ 206
nervosus, Rottl. ... ... „ 136
nigritanus, Benth. ... ... „ 186
nigrum, Ham. ... ... „ 185
nilagiricus, Hochst.... ... „ 206
nitidulus, *Hk. f.* ... ... „ 199
nitidus, Kunth ... ... „ 185
nodulibarbis, Hochst. ... „ 192
notopogon, Steud. .. ... „ 129
nudus, Steud. ... ... „ 146
nutans, Linn. ... ... „ 213
obtusifolius, Poir. ... ... „ 165
obtusus, Nees ... ... „ 196
obvallatus, Steud. ... ... „ 129
odoratus, *Lisb.* ... ... „ 177
odoratus, Lisb. ... ... „ 172
oliganthus, *Hochst.* ... „ 201
Olivieri, Boiss. ... ... „ 203
Orthos, Schult. .. .. „ 168
oryzetorum, Hack. ... ... „ 172
pachnodes, Trin. ... ... „ 204
pachyarthrus, Hack. ... „ 170
paleaceus, Steud. ... ... „ 142
pallidus, Kunth ... ... „ 188
paniceus, Heyne ... ... „ 71, 73
paniculatus, Lam. ... ... „ 188
panormitanus, Parl. ... „ 173
papillosus, Hochst. ... ... „ 197
parviflorus, Roxb. ... ... „ 165
parviflorus, Wight ... ... „ 218
parvispica, Steud. ... ... „ 179
patenti-villosus, Steud. ... „ 134
pectinatus, Steud. ... ... „ 140
pedicellatus, Steud. ... ... „ 185
? *pendulus*, Nees ... ... „ 206
peninsulæ, Steud. ... ... „ 192
pentastachyus, Heyne ... „ 172
perfossus, Nees ... ... „ 176
pertusus, *Willd.* ... ... „ 173

Andropogon Vol. Page
pertusus, Ham.... ... ... vii 196
pertusus, Thw. .. .. „ 176
petiolaris, Steud. ... ... „ 139
? *petiolatus*, Dalz. & Gibs. „ 139
Petitianus, A. Rich. ... „ 166
pilifer, Steud. ... ... „ 130
pilosus, Klein ... ... „ 130
pilosus, Willd. ... ... „ 112
polymorphus, Steud. ... „ 133
polyneuros, Steud. ... ... „ 205
polyphyllus, *Hack.* ... ... „ 194
polyptychus, *Steud.* ... „ 198
polystachyos, *Roxb.* ... „ 202
polystachyus, Roxb.... ... „ 199
polystichus, Hochst. ... „ 200
polystictus, Hochst. ... „ 200
Princeps, A. Rich. ... ... „ 148
prionodes, Maxim. ... ... „ 144
procerus, F. Muell. ... ... „ 209
prostratus, Linn. ... ... „ 218
prostratus, Russ. ... ... „ 218
pruinosus, Nees ... ... „ 205
Pseudischæmum, *Nees* ... „ 172
? *Pseudischæmum*, Duthie „ 176
Pseudograyia, Steud. ... „ 167
pteropechys, *Clarke* ... „ 181
pumilus, *Roxb.* ... ... „ 170
pumilus, Roxb. ... ... „ 202
punctatus, Aitch. ... ... „ 173
punctatus, Roxb. ... ... „ 176
punctatus, Trin. ... ... „ 176
purpureo-sericeus, *Hochst.* „ 185
quadrivalva, Linn. ... ... „ 213
quinqueflorus, Heyne ... „ 172
radicans, Lehm. ... ... „ 171
ramosus, Heyne ... ... „ 168
Ravennae, Linn. ... ... „ 121
relictus, Steud.... ... ... „ 133
repens, Steud. ... ... „ 133
Retzii, Steud. ... ... vii. 134, 146
rhizophorus, Steud. ... ... vii. 108
Ritchiei, *Hk. f.* ... ... „ 201
Robertianus, Steud. ... „ 136
Roxburghianus, Schult. ... „ 104
Roxburghii, Nees ... ... „ 206
Royleanus, Steud. ... ... „ 188
rudis, Steud. ... ... „ 144
saccharatus, Roxb. ... ... „ 183
? *saccharoides*, Roxb. ... „ 177
scandens, Roxb. ... ... „ 197
scandens, Thw. ... ... „ 172
schangulensis, Rupr. ... „ 136
Schmidii, *Hk. f.* ... ... „ 180
Schœnanthus, *Linn.* ... „ 204
Schœnanthus, Roxb. ... „ 206
Schœnanthus, Wall. vii. 205, 206, 207
scoparius, Heyne ... ... vii. 70

Andropogon ... Vol. Page
scrobiculatus, Kunth ... vii. 200
segænsis, Steud. ... ... „ 200
segetum, Steud. ... ... „ 128
Sehima, Steud. ... ... „ 136
semiberbis, Kunth ... ... „ 167
semisagittatus, Steud. ... „ 130
serratifolius, Heyne ... „ 215
serratus, *Thunb.* ... ... „ 185
serratus, Miq. ... ... „ 179
serratus, Retz. ... ... „ 196
serrulatus, Link ... ... „ 144
simillimus, Steud. ... ... „ 134
Sorghum, *Brot.* ... ... „ 183
Sorghum, Roxb. ... ... „ 183
speciosus, Steud. ... ... „ 152
Sprengelii, Kunth ... ... „ 193
squarrosus, *Linn. f.* ... „ 186
squarrosus, Linn. ... ... „ 62
Stapfii, *Hk. f.* ... ... „ 184
stipæformis, Steud. ... ... „ 104
striatus, Klein ... ... „ 136
strictus, Roxb. ... ... „ 168
submuticus, Steud. ... ... „ 145
subrepens, Steud. ... ... „ 179
subulatus, Presl ... ... „ 188
subunifoveolatus, Steud. „ 174
tacazensis, Steud. ... ... „ 136
tenellus, Presl ... ... „ 165
tenellus, Roxb. ... ... „ 196
tetra-aristatus, Roxb. ... „ 292
timorensis, Steud. ... ... „ 136
Tong-dong, Steud. ... ... „ 128
tridentatus, Roxb. ... ... „ 149
Trinii, Steud. ... ... „ 193
trispicatus, Schult. ... ... „ 112
tristachyus, Roxb. ... ... „ 112
tristis, *Nees* ... ... „ 169
triticeus, *Br.* ... ... „ 200
tropicus, Spreng. ... ... „ 185
tuberculatus, *Hack.* ... „ 168
umbellatus, Hack. ... ... „ 220
undatus, Jacq. ... ... „ 67
undulatus, Heyne ... ... „ 172
Vachelii, Nees ... ... „ 176
velutinus, *Hk. f.* ... ... „ 194
venustus, *Thw.* ... ... „ 178
versicolor, Nees ... ... „ 205
verticillatus, *Roxb.* ... ... „ 189
villosulus, Steud. ... ... „ 179
villosus, Lamk. ... ... „ 172
vimineus, Trin. ... ... „ 117
violaceus, Heyne ... ... „ 146
virens, Spreng. ... ... „ 73
Wightianus, *Steud.* ... ... „ 191
Woodrovii, *Hk. f.* ... ... „ 173
zeylanicus, *Nees* ... ... „ 192
zeylanicus, Arn. ... ... „ 167

Andropogon ... Vol. Page
sp., Hk. f. & T. ... ... vii. 108
sp., Wall. ...vii. 108, 109, 110, 112, 115, 116, 130, 136, 165, 168, 170, 173, 174, 176, 178, 185, 196, 197, 200, 205, 208.
ANDROPOGONEÆ ... ... vii. 3, 99
Androsace, *Linn.* ... iii. 495, 672
Aizoon, *Duby* ... ... iii. 497
? *carnosula*, Duby ... ... „ 496
Chamæjasme, *Host* ... ... „ 499
cordifolia, *Wall.* ... ... „ 500
Croftii, *Watt* ... ... „ 672
elegans, Jacquem. ... ... „ 496
foliosa, Duby ... ... „ 498
foliosa, Klatt ... ... „ 498
geraniifolia, *Watt* ... ... „ 497
globifera, *Duby* ... ... „ 500
globifera, Klatt ... ... „ 498
Hookeriana, *Klatt* ... ... „ 499
incisa, Wall. ... ... „ 496
Jacquemontii, Duby ... „ 499
lanuginosa, *Wall.* ... ... „ 498
Lehmanni, *Wall.* ... ... „ 500
microphylla, *Hk. f.* ... „ 498
muscoidea, *Duby* ... ... „ 499
obovata, Wall. ... ... „ 495
parviflora, Jacquem. ... „ 496
patens, Wright ... ... „ 496
primulina, Spreng. ... „ 492
primuloides, D. Don ... „ 492
primuloides, Duby ... ... „ 498
rotundifolia, *Hardw.* ... „ 496
rotundifolia, Wall. ... ... „ 496
sarmentosa, *Wall.* ... ... „ 498
saxifragæfolia, *Bunge* ... „ 496
Selago, *Hk. f. & T.* ... ... „ 500
sempervivoides, *Jacquem.* „ 497
septentrionalis, *Linn.* ... „ 497
villosa, *Linn.* ... ... „ 499
villosa, Hk. f. & T. ... ... „ 498
villosa, Jacquem. ... ... „ 499
Androscepia anathera, Andersson. ... ... vii. 215
gigantea, Anderss. ... ... „ 217
glabrata, Anderss. ... ... „ 216
mutica, Anderss. ... ... „ 217
tremula, Anderss. ... ... „ 214
Androsyce indica, Wedd. ... v. 563
Androtropis tomentosa, Br.... iii. 92
Aneilema, *Br.* ... ... vi. 374
æquinoctiale, Kunth ... „ 383
canaliculatum, Dalz. ... „ 378
compressum, Dalz. ... ... „ 379
conspicuum, *Kunth* ... „ 382
croceum, Griff. ... ... „ 380
cymosum, Kunth ... ... „ 390
debile, Wall. ... ... „ 379

Aneilema Vol. Page
densiflorum, Kunth ... ... vi. 390
diandrum, Ham. ... ... „ 379
didymum, Wall. ... ... „ 368
dimorphum, *Dalz.* ... ... „ 377
dimorphum, Thw. ... ... „ 376
divergens, *Clarke* ... ... „ 376
diversifolium, Hassk. ... „ 379
elatum, Kunth ... ... „ 377
ensifolium, Wight ... ... „ 379
esculentum, *Wall.* ... vi. 377, 379
filiforme, Ham. ... ... vi. 381
foliosum, Hassk. ... ... „ 379
giganteum, *Br.* ... ... „ 379
glaucum, *Thw.* ... ... „ 375
gramineum, Br. ... ... „ 377
Hamiltonianum, *Wall.* ... „ 380
herbaceum, Wall. ... vi. 377, 382
hispidum, D. Don ... ... vi. 390
Hookeri, *Clarke* ... ... „ 376
Junghuhnianum, Miq. ... „ 379
Kœnigii, Wall. ... ... „ 381
lancifolium, Griff. ... ... „ 379
lanuginosum, *Wall.* ... „ 380
latifolium, Wight ... ... „ 377
lineolatum, *Kunth* ... ... „ 376
longifolium, Hook. ... ... „ 379
longifolium, Wall. ... ... „ 376
loriforme, Hassk. ... ... „ 379
Loureirii, *Hance* ... ... „ 375
? *melanostictum*, Hance ... „ 377
minutum, Kunth ... ... „ 379
montanum, *Wight* ... ... „ 381
montanum, Thw. ... ... „ 376
nanum, Kunth ... ... „ 377
nudicaule, Kunth ... ... „ 379
nudiflorum, *Br.* ... ... „ 378
nudiflorum, Miq. ... vi. 377, 381
nudiflorum, Wall. ... ... vi. 381
nummularium, Miq.... ... „ 378
ochraceum, *Dalz.* ... ... „ 380
ovalifolium, *Hk. f.* ... ... „ 382
ovatum, *Wall.* ... ... „ 382
paniculatum, *Wall.* ... ... „ 381
paniculatum, Wight ... „ 377
pauciflorum, *Wight* ... ... „ 378
pauciflorum, Dalz. ... ... „ 381
pilosum, Wall. ... ... „ 380
protensum, Thw. ... ... „ 376
protensum, Wall. ... ... „ 382
radicans, D. Don ... ... „ 378
reniforme, Ham. ... ... „ 368
scaberrimum, *Kunth* ... „ 382
scapiflorum, *Wight* ... ... „ 375
scapiflorum, Hk. f. & T. ... „ 376
secundiflorum, Kunth ... „ 368
secundum, Wight ... ... „ 379
semiteres, Dalz. ... ... „ 381

Aneilema Vol. Page
serotinum, D. Don ... ... vi. 375
sinicum, *Lindl.* ... ... „ 379
spectabile, Kurz ... ... „ 375
spicatum, Wall. ... ... „ 375
spiratum, *Br.* ... ... „ 377
terminale, Wight ... ... „ 379
Thomsoni, *Clarke* ... ... „ 376
trichocolea, Schau. ... ... „ 379
triquetrum, *Wall.* ... ... „ 378
tuberosum, Ham. ... ... „ 375
vaginatum, *Br.* ... ... „ 381
versicolor, *Dalz.* ... ... „ 378
zeylanicum, *Clarke* ... ... „ 376
sp., Hk. f. & T. ... vi. 376, 382
sp., Miq. ... ... vi. 377
sp., Wall. ... ... „ 368
Anemagrostis Neesiana, W. & A. ... ... vii. 70
tenella, Wight ... ... „ 71
Anemone, *Linn.* ... ... i. 7
albana, *Stev.* ... ... „ 7
biflora, *DC.* ... ... „ 7
curta, Wall. ... ... „ 2
cynosurus, Griff. ... ... „ 16
demissa, *Hk. f. & T.* ... „ 9
discolor, Royle ... ... „ 8
dubia, Wall. ... ... „ 9
elongata, *D. Don* ... ... „ 10
Falconeri, *Thoms.* ... ... „ 8
geraniifolia, Wall. ... ... „ 9
Gortschakowii, Kar. & Kir. „ 7
Govaniana, Royle ... ... „ 9
Govaniana, Wall. ... ... „ 8
Griffithii, *Hk. f. & T.* ... „ 8
hispida, Wall. ... ... „ 9
longiscapa, Wall. ... ... „ 9
micrantha, Klotz. ... ... „ 8
mollis, Wall. ... ... „ 8
narcissiflora, *Linn.* ... ... „ 10
obtusiloba, *D. Don* ... ... „ 8
polyanthes, *D. Don* ... ... „ 9
pratensis, Linn. ... ... „ 7
rivularis, *Ham.* ... ... „ 9
rivularis, Wall. ... ... „ 10
rupestris, *Wall.* ... ... „ 9
rupicola, *Camb.* ... ... „ 8
scaposa, Edgew. ... ... „ 9
tetrasepala, *Royle* ... ... „ 10
trullifolia, *Hk. f. & T.* ... „ 9
villosa, Royle ... ... „ 9
vitifolia, *Ham.* ... ... „ 8
Wallichiana, Royle ... ... „ 7
Wightiana, Wall. ... ... „ 9
ANEMONEÆ ... ... i. 1
Anerincleistus, *Korth.* ... ii. 529
Griffithii, *Hk. f.* ... ... „ 529
Helferi, *Hk. f.* ... ... „ 529

Vol. Page
Anethum Fœniculum, Linn. ii. 695
  graveolens, Linn. ... ... „ 709
  Panmorium, Roxb. ... ... „ 695
  Sowa, Roxb. ... ... „ 709
  trifoliatum, Roxb. ... ... „ 685
Angelica, *Linn.* ... ... ii. 706
  Archangelica, Linn. ... ... „ 707
  ? *Candollii*, Wall. ... ... „ 700
  glauca, *Edgew.* ... ... „ 706
Angræcum pugioniforme, Klotz. vi. 70
  zeylanicum, Lindl. ... ... „ 78
Anguillaria, Gaertn.
  zeylanica, Gaertn. ... ... iii. 523
Anguillaria, Br.
  Heyneana, Wall. ... ... vi. 357
  indica, Br. ... ... „ 357
  indica, Grah. ... ... „ 357
ANGUILLARIEÆ ... . vi. 301
Ania angustifolia, Lindl. ... v. 819
  bicornis, Lindl.... ... ... „ 820
  latifolia, Lindl. ... ... „ 820
  ? *latifolia*, Wight ... ... „ 821
  maculata, Thw.... ... v. 784, 822
Anictoclea Grahamiana, Nimmo ... ... ii. 657
Anisadenia, *Wall.* ... ... i. 412
  khasyana, Griff. ... ... „ 412
  pubescens, *Griff.* ... ... „ 413
  saxatilis, *Wall.* ... ... „ 412
Anisantha pontica, C. Koch vii. 359
Aniseia, Chois. ... ... iv. 200
  Afzelii, G. Don (*Ariseia*) „ 217
  barlerioides, Chois. ... ... „ 201
  bracteata, Hassk. (*Ariseia*) „ 217
  calycina, Chois. ... ... „ 201
  uniflora, Chois.... ... ... „ 201
Anisochilus, *Wall.* ... ... iv. 627
  adenanthus, *Dalz. & Gibs.* „ 630
  albidus, Wight ... ... „ 628
  carnosus, *Wall.* ... ... „ 627
  crassus, Benth.... ... ... „ 627
  decussatus, Dalz. & Gibs. „ 628
  dysophylloides, *Benth.* ... „ 628
  eriocephalus, *Benth.* ... „ 627
  glaber, Schrad.... ... ... „ 627
  pallidus, *Wall.* ... ... „ 629
  paniculatus, *Benth.* ... ... „ 628
  plantagineus, *Hk. f.* ... „ 628
  polystachyus, *Benth.* ... „ 630
  purpureus, Wight ... ... „ 628
  robustus, *Hk. f.* ... ... „ 629
  rupestris, Wight ... ... „ 627
  scaber, *Benth.* ... ... „ 627
  sericeus, *Benth.* ... ... „ 629
  suffruticosus, *Wight* ... „ 628
  suffruticosus, Thw. ... ... „ 630
  verticillatus, *Hk. f.* ... ... „ 629
Anisochilus
  Wightii, *Hk. f.* ... ... iv. 628
Anisodus humilis, *Hk. f.* ... iv. 242
  luridus, (*luridans*) Link & Otto ... ... „ 243
  stramonifolius, G. Don ... „ 243
Anisomeles, *Br.* ... ... iv. 672
  candicans, *Benth.* ... ... „ 673
  disticha, Heyne ... ... „ 672
  glabrata, Benth. ... ... „ 672
  Heyneana, *Benth.* ... ... „ 672
  intermedia, Wight ... ... „ 673
  malabarica, *Br.* ... ... „ 673
  mollissima, Wall. ... ... „ 672
  nepalensis, Spreng. ... ... „ 672
  ovata, *Br.* ... ... „ 672
Anisonema dubium, Bl. ... v. 288
  eglandulosum, Dcne. ... „ 288
  intermedium, Dcne.... ... „ 288
  multiflorum, Wight ... ... „ 288
  reticulatum, A. Juss. ... „ 288
  Zollingeri, Miq.... ... ... „ 288
Anisopetalum Careyanum, Hk. v. 760
  lasianthum, Kuhl ... ... „ 763
Anisophyllea, *Br.* ... ... ii. 441
  disticha, *Hook.* ... ... „ 442
  grandifolia, *G. Hensl.* ii. 442, iv. 86
  Griffithii, *Oliv.* ... ... ii. 442
  zeylanica, *Benth.* ... ... „ 442
ANISOPHYLLEÆ ... ... ii. 435
Anisophyllum Burmannianum, Kl. & Gar. ... v. 252
  Forskalii, Kl. & Gar. ... „ 252
  thymifolium, Kl. & Gar. ... „ 252
Anisoptera, *Korth.* ... ... i. 300
  glabra, *Kurz* ... ... „ 301
  oblonga, *Dyer* ... ... „ 301
  odorata, Kurz ... ... „ 301
Anneslea, *Wall.* ... ... i. 280
  crassipes, *Hook.* ... ... „ 280
  fragrans, *Wall.* ... ... „ 280
Anneslia spinosa, Roxb. ... i. 115
Anoda, *Cav.* ... ... i. 321
  hastata, *Linn.* ... ... „ 321
Anodendron, *A. DC.* ... ... iii. 668
  Candolleanum, *Wight* ... „ 669
  paniculatum, *A. DC.* ... „ 668
  pauciflorum, *Hk. f.* ... ... „ 669
  rhinosporum, *Thw.* ... ... „ 669
  rubescens, Teysm. & Binn. „ 669
Anogeissus, *Wall.* ... ... ii. 450
  acuminata, *Wall.* ... ... „ 450
  hirta, Wall. ... ... „ 450
  latifolia, *Wall.* ... ... „ 450
  myrtifolia, Wall. ... ... „ 451
  pendula, *Edgew.* ... ... „ 451
  phillyreæfolia, *Heurck & Muell.* ... ... „ 451

Vol. Page
Anomanthodia, *Hk. f.* ... iii. 108
auriculata, *Hk. f.* ... „ 108
Anomosanthes deficiens, Bl. i. 671
Anomospermum excelsum, Dalz. ... v. 282
Anona, *Linn.* ... i. 78
reticulata, *Linn.* ... „ 78
squamosa, *Linn.* ... „ 78
Anonacea? Hiern ... iii. 572
ANONACEÆ ... i. 45
Anosporum, Nees ... vi. 597
Cephalotes, Kurz ... „ 597
monocephalum, Nees ... „ 597
pallidum, Boeck. ... „ 598
Anotis, *DC.* ... iii. 71
calycina, *Hk. f.* ... „ 73
capitata, Korth. ... „ 63
carnosa, *Hk. f.* ... „ 74
decipiens, *Hk. f.* ... „ 72
fœtida, *Dalz.* ... „ 74
gracilis, *Hk. f.* ... „ 71
ingrata, *Hk. f.* ... „ 71
lancifolia, *Hk. f.* ... „ 73
Leschenaultiana, *Hk. f.* ... „ 72
monosperma, *Hk. f.* ... „ 75
Montholoni, *Hk. f.* ... „ 73
nummularia, *Hk. f.* ... „ 75
oxyphylla, *Hk. f.* ... „ 72
quadrilocularis, *Hk. f.* ... „ 74
Rheedii, *Hk. f.* ... „ 73
Richardiana, *Hk. f.* ... „ 75
Ritchiei, *Hk. f.* ... „ 74
urophylla, *Hk. f.* ... „ 72
Wightiana, *Hk. f.* ... „ 75
Anplectrum, *A. Gray* ... ii. 545
annulatum, *Triana* ... „ 546
assamicum, *Clarke* ... „ 546
barbatum, *Triana* ... „ 546
cyanocarpum, Kurz ... „ 545
divaricatum, *Triana* ... „ 546
glaucum, *Triana* ... „ 545
pallens, *Bl.* ... „ 545
parviflorum, Benth. ... „ 528
Anquetilia Laureola, Dcne. ... i. 499
Anstrutheria zeylanica, Gard. ii. 441
Antennaria, *Gaertn.* ... iii. 278
cinnamomea, DC. ... „ 281
contorta, D. Don ... „ 285
hyperborea, D. Don ... „ 264
muscoides, *Hk. f. & T.* ... „ 278
nana, *Hk. f. & T.* ... „ 278
Timmua, D. Don ... „ 281
triplinervis, Sims ... „ 281
villosissima, D. Don, lapsu Gnaphalium ... „ 283
Antheischima, excelsa, Korth i. 291
ANTHEMIDEÆ ... iii. 224, 311

Vol. Page
Anthemis, *Linn.* ... iii. 312
Cotula, *Linn.* ... „ 312
odontostephana, *Boiss.* ... „ 312
pygmæa, Bert. ... „ 316
scaposa, Gay ... „ 312
Anthericum adenanthera, Forst. ... vi. 337
nepalense, Spreng. ... „ 335
Nimmonii, Grah. ... „ 336
niveum, Schult. f. ... „ 336
ornithogaloides, Hochst. ... „ 334
parviflorum, Benth. ... „ 336
serotinum, Linn. ... „ 354
tuberosum, Heyne ... „ 334
tuberosum, Roxb. ... vi. 334 335
uniflorum, Roxb. ... vi. 355
Anthistiria, *Linn.* ... vii. 210
anathera, *Nees* ... „ 215
arguens, *Willd.* ... „ 211
arguens, Heyne ... „ 214
arguens, Wight ... „ 213
arguta, Nees ... „ 218
arundinacea, Hack. ... „ 217
arundinacea, Hassk. ... „ 211
arundinacea, Roxb. ... „ 217
australis, Br. ... „ 213
barbata, Desf. ... „ 213
caudata, Hack. ... vii. 216, 217
caudata, Nees ... vii. 217
ciliata, *Linn. f.* ... „ 213
ciliata, Munro ... „ 213
ciliata, Retz. ... „ 212
ciliata, Thunb. ... „ 213
cimicina, Edgew. ... „ 218
cymbaria, *Roxb.* ... „ 215
fasciculata, Thw. ... „ 209
Forskahlii, Kunth ... „ 212
frondosa, Br. ... „ 211
genuina, Hack. ... „ 217
gigantea, *Cav.* ... „ 216
gigantea, Cav. ... „ 217
gigantea, Hack. ... „ 216
Helferi, Munro ... „ 214
heteroclita, Roxb. ... „ 219
Hookeri, *Griseb.* ... „ 216
imberbis, *Retz.* ... „ 211
imberbis, Retz. ... „ 213
Junghuhniana, Nees ... „ 211
laxa, *Anderss.* ... „ 213
Linnæana, Steud. ... „ 218
longispatha, Hack. ... „ 217
mutica, Steud. ... „ 217
pilifera, Steud. ... „ 211
? *polystachya*, Roxb. ... „ 212
prostrata, Willd. ... „ 218
? *puberula*, Anderss. ... „ 213
scandens, Roxb. ... „ 213

Anthistiria ... Vol. Page
semiberbis, Nees ... ... vii. 213
strigosa, *Ham.* ... ... „ 214
subsericans, Nees ... ... „ 217
Thwaitesii, *Hk. f.* ... ... „ 215
tremula, *Nees* ... ... „ 214
villosa, Hack. ... ... „ 217
villosa, Poir. ... ... „ 217
vulgaris, Hack ... ... „ 212
vulpina, Anderss. ... ... „ 217
Wightii, Nees ... ... „ 218
sp., Wall. ... ... vii. 206, 212, 213, 214, 215, 217, 218, 219.
ANTHOBOLEÆ ... ... v. 229
Anthocephalus, *A. Rich.* ... iii. 23
Cadamba, *Miq.* ... ... „ 23
chinensis, Hassk. ... ... „ 26
indicus, Rich. ... ... „ 26
morindæfolius, Korth. ... „ 23
Anthocometes aristatus, Nees iv. 524
Anthogonium, *Lindl.* ... ... v. 822
gracile, *Lindl.* ... ... „ 822
Griffithii, Rchb. f. ... ... „ 823
sp., Griff. ... ... „ 823
Anthoxanthum, *Linn.* ... vii. 221
indicum, Linn. ... ... „ 98
odoratum, *Linn.* ... ... „ 222
Anthriscus, *Hoffm.* ... ... ii. 692
nemorosa, *Spreng.* ... ... „ 692
Anthyllis cuneata, Dum. ... ii. 142
Antiaris, *Leschen.* ... ... v. 537
dubia, Spanog. ... ... „ 537
innoxia, Bl. ... ... „ 537
macrophylla, Br. ... ... „ 538
rufa, Miq. ... ... „ 538
saccidora, Dalz. ... ... „ 537
toxicaria, *Leschen.* ... ... „ 537
Anticharis, *Endl.* ... ... iv. 249
glandulosa, *Aschers* ... ... „ 249
linearis, *Hochst.* ... ... „ 250
Antichorus depressus, Linn. i. 398
Antidesma, *Linn.* ... ... v. 354
acidum, Retz. ... ... v. 357, 364
acuminatum, *Wall.* ... ... v. 363
alatum, *Hk. f.* ... ... „ 358
Alexiteria, *Linn.* ... ... „ 359
? *Alexiteria*, Gaertn. ... „ 364
Alexiteria, Presl ... ... „ 362
andamanicum, *Hk. f.* ... „ 364
assamicum (nom. delend.) „ 363
attenuatum, Wall. ... ... „ 356
brunneum, *Hk. f.* ... ... „ 359
Bunius, *Spreng.* ... ... „ 358
Bunius, Miq. ... ... „ 364
Bunius, Wall. ... v. 358, 360, 363
ciliatum, Presl ... ... v. 358
comptum, *Tulasne* ... ... „ 365
? *coriaceum*, Bl. ... ... „ 352

Antidesma ... Vol. Page
coriaceum, Tulasne ... ... v. 359
cuspidatum, *Muell.* ... ... „ 360
diandrum, *Roth* ... ... „ 361
fallax, *Muell.* ... ... „ 359
flexuosum, Tulasne ... ... „ 360
floribundum, Tulasne ... „ 358
fruticulosum, *Kurz* ... ... „ 360
Ghesæmbilla, *Gaertn.* ... „ 357
glabrum, Tulasne ... ... „ 358
Helferi, *Hk. f.* ... ... „ 357
khasianum, *Hk. f.* ... ... „ 362
Kingii, *Hk. f.* ... ... „ 356
lanceolarium, Wall. ... ... „ 361
lanceolatum, Dalz. & Gibs. „ 364
lanceolatum, Hk. f. & T. „ 362
leptocladon, Tulasne ... „ 362
leucocladon, *Hk. f.* ... ... „ 358
longipes, *Hk. f.* ... ... „ 355
lunatum, Miq. ... ... „ 352
macrophyllum, Wall. ... „ 363
martabanicum, *Presl* ... „ 363
Menasu, *Miq.* ... ... „ 364
? *Menasu*, Gamble ... ... „ 363
Menasu, Kurz ... ... „ 364
Menasu, Muell. ... ... „ 363
minus, Bl. ? ... ... „ 362
molle, Wall. ... ... „ 356
montanum, Thw. ... ... „ 362
Moritzii, *Muell.* ... ... „ 362
nervosum, Wall. ... ... „ 485
neurocarpum, Miq. ... ... „ 358
nigricans, *Tulasne* ... v. 360, 365
nigricans, Hk. f. & T. ... v. 365
oblongatum, *Muell.* ... ... „ 365
oblongifolium, Bl. ... v. 362, 363
oblongum, Wall. ... ... v. 364
pachystachys, *Hk. f.* ... „ 355
paniculatum, Roxb. ... ... „ 357
parviflorum, Ham. ... ... „ 361
pendulum, *Hk. f.* ... ... „ 356
persimile (perserrula), *Kurz* ... ... „ 365
pubescens, Hk. f. & T. ... „ 364
pubescens, Moritz ... ... „ 362
pubescens, Roxb. ... ... „ 357
pubescens, Tul. ... ... „ 363
puncticulatum, Miq. ... „ 366
pyrifolium, *Muell.* ... ... „ 362
refractum, Muell. ... ... „ 363
? *rotatum*, Muell. ... ... „ 360
Roxburghii, *Wall.* ... ... „ 357
salicifolium, *Miq.* ... ... „ 366
simile, Muell. ... ... „ 363
sylvestre, Lamk. ... v. 357, 358
sylvestre, Wall. ... ... v. 361
Thwaitesianum, Muell. ... „ 358
tomentosum, Bl. ... ... „ 356

Antidesma Vol. Page
velutinosum, *Bl.* ... ... v. 356
velutinum, *Tulasne*... ... „ 361
Wallichianum, Presl ... „ 361
Wattii, *Hk. f.* ... ... „ 366
zeylanicum, Ham. ... ... „ 363
zeylanicum, Lamk. ... ... „ 359
Antidesma sp., Wall. v. 355, 356, 357, 358, 359, 360, 361, 362, 364, 440, 619.
Antidesmeæ ?, Fin. ... ... v. 619
ANTIRRHINEÆ ... ... iv. 246, 734
ANTIRRHINIDEÆ ... ... iv. 246
Antirrhinum, *Linn.* ... ... iv. 253
gibbosum, Wall. ... ... „ 253
glaucum, Stocks ... ... „ 252
gratissimum, Roxb. ... ... „ 266
hexandrum, Forsk. ... ... „ 279
majus, Linn. ... ... „ 253
minus, Linn. ... ... „ 252
Orontium, *Linn.* ... ... „ 253
papilionaceum, Burm. ... „ 252
Antirrhœa, *Comm.* ... ... iii. 126
Antistrophe, *A. DC.* ... ... iii. 531
oxyantha, *A. DC.* .. ... „ 532
serratifolia, *Hk. f.* ... ... „ 532
Antitaxis, *Miers* ... ... i. 106
fasciculata, *Miers* ... ... „ 106
Antonia Griffithii, Wight ... iv. 85
Aopla reniformis, Lindl. ... vi. 152
Apama siliquosa, Lamk. ... v. 73
Aparisthmium javense, Hassk. ... ... v. 422
sumatranum, Rchb. f. & Zoll. ... ... „ 421
Apaturia Lindleyana, Wight v. 812
montana, Lindl. ... ... „ 812
montana, Thw. ... ... vi. 117
senilis, Lindl. ... ... v. 812
Smithiana, Lindl. ... ... „ 812
Aperula assamica, Meissn.... v. 182
Meissneri, Herb. Calc. ... „ 182
Neesiana, Bl. ... ... „ 186
oxyphylla, Meissn. ... ... „ 183
Apetalon minutum, Wight... vi. 122
Aphanamixis rubiginosa, Griff. ... ... i. 561
Aphananthe cuspidata, Planch. ... ... v. 486
Aphanochilus blandus, Benth. iv. 644
eriostachys, Benth. ... ... „ 645
flavus, Benth. ... ... „ 643
fœtens, Benth. ... ... „ 644
incisus, Benth. ... ... „ 644
paniculatus, Benth.... ... „ 644
pilosus, Benth. ... ... „ 644
polystachyus, Benth. ... „ 643
Aphylleia erubescens, Champ. vi. 558

Vol. Page
Aphyllorchis, *Bl.*... ... ... vi. 116
montana, *Rchb. f.* ... ... „ 116
pallida, *Bl.* ... ... „ 117
Prainii, *Hk. f.* ... ... „ 117
? vaginata, *Hk. f.* ... ... „ 117
Apios, *Mœnch.* ... ... ii. 188
carnea, *Benth.*... ... ... „ 188
Apium, *Linn.* ... ... ii. 678
graveolens, *Linn.* ... ... „ 679
involucratum, Roxb. ... „ 682
Aplotaxis albescens, DC. ... iii. 374
andryaloides, DC. ... ... „ 377
auriculata, DC.... ... ... „ 374
Bungei, DC. ... ... „ 373
cæspitosa, DC. ... ... „ 369
candicans, DC. ... ... „ 373
Candolleana, DC. ... ... „ 372
carthamoides, Ham. ... ... „ 373
cirsioides, DC. ... ... „ 362
deltoides, DC. ... ... „ 374
denticulata, DC. ... ... „ 375
discolor, DC. ... ... „ 372
fastuosa, Dcne.... ... ... „ 375
foliosa, *Edgew*.... ... ... „ 373
gnaphalodes, Royle ... ... „ 377
gossypina, DC. ... ... „ 376
Jacea, Klotz. ... ... „ 375
Lappa, Dcne. ... ... „ 376
leontodontoides, DC.... ... „ 369
multicaulis, DC. ... ... „ 373
nepalensis, Spreng. ... ... „ 370
nivea, DC. ... ... „ 375
obvallata, DC. ... ... „ 365
? *pungens*, DC. ... ... „ 362
Roylei, DC. ... ... „ 370
scaposa, Edgew. ... ... „ 373
sorocephala, Schrenk ... „ 377
Apluda, *Linn.* ... ... vii. 150
aristata, *Hack.*... ... ... „ 150
aristata, Auct. ... ... „ 150
aristata, Linn. ... ... „ 150
ciliata, Anderss. ... ... „ 151
communis, Nees & Arn. ... „ 151
Cumingii, Buese ... ... „ 150
geniculata, Roxb. ... ... „ 150
gigantea, Spreng. ... ... „ 150
? *glauca*, Schreb. ... ... „ 150
Gryllus, Beauv. ... ... „ 151
Gryllus, Presl ... ... „ 188
humilis, Kunth ... ... „ 150
inermis, Regel ... ... „ 150
microstachya, Nees ... ... „ 151
mucronata, Steud. ... ... „ 150
mutica, *Hack.* ... ... „ 150
mutica, Auct. ... ... „ 150
mutica, Linn. ... ... „ 150
rostrata, Arn. & Nees ... „ 151

Apluda Vol. Page
rugosa, Russ. ... vii. 128
scabra, Anderss. ... „ 151
varia, *Hack.* ... „ 150
villosa, Schreb. ... „ 151
Zeygites, Aubl. ... „ 60
sp., Wall. ... vii. 150, 151
Apocopis, *Nees* ... vii. 142
Beckettii, Thw. ... „ 142
genuinus, Hack. ... „ 143
mangalurensis, Hack. ... „ 143
pallida, *Hk. f.* ... „ 143
Royleana, *Nees* ... „ 142
vaginatus, Hack. ... „ 143
Wightii, *Nees* ... „ 142
Wightii, Thw. ... „ 143
Wrightii, Munro ... „ 142
APOCYNACEÆ ... iii. 621
Apocynea viminea, Wall. ... iv. 64
sp., Wall. ... iii. 640
Apocynum, *Linn.* ... iii. 657
frutescens, Linn. ... „ 669
orixense, Rottl. ... iv. 6
reticulatum, Herb. Madr. „ 11
tiliæfolium, Lamk. ... „ 46
venetum, *Linn.* ... iii. 657
Apodytes, *E. Mey.* ... i. 587
andamanica, *Kurz* ... „ 588
Beddomei, *Mast.* ... „ 588
Benthamiana, *Wight* ... „ 588
Gardneriana, *Miers* ... „ 588
Apollonias, *Nees* ... v. 121
Arnottii, *Nees* ... „ 121
zeylanica, Thw. ... „ 124
Aponogeton, *Thunb.* ... vi. 564
crispum, *Thunb.* ... „ 564
echinatum, *Roxb.* ... „ 564
flavidum, Ham. ... „ 564
lucens, Hb. Madr. ... „ 564
microphyllum, *Roxb.* ... „ 565
monostachyon, *Linn. f.* ... „ 564
monostachys, Edgew. ... „ 564
undulatum, Roxb. ... „ 564
Aporetica ternata, Forst. ... i. 674
Aporosa, *Bl.* ... v. 345
acuminata, *Thw.* ... „ 348
affinis, Baill. ... „ 349
aurea, *Hk. f.* ... „ 351
aurita, Miq. ... „ 346
Benthamiana, *Hk. f.* ... „ 352
calocarpa, Kurz ... „ 343
Clellandii, *Hk. f.* ... „ 348
Cumingiana, Baill. ... „ 346
dioica, Muell. ... „ 348
falcifera, *Hk. f.* ... „ 352
ficifolia, *Baill.* ... „ 346
fusiformis, *Thw.* ... „ 351
glabrifolia, *Kurz* ... „ 349

Aporosa Vol. Page
globifera, *Hk. f.* ... v. 347
Griffithii, *Hk. f.* ... „ 353
lanceolata, *Thw.* ... „ 351
lanceolata, Kurz ... „ 350
latifolia, *Thw.* ... „ 347
Lindleyana, *Baill.* ... „ 349
lunata, *Benth.* ... „ 352
macrophylla, *Muell.* ... „ 346
Maingayi, *Hk. f.* ... „ 348
microcalyx, *Hassk.* ... „ 346
microsphæra, *Hk. f.* ... „ 350
microstachya, *Muell.* ... „ 349
microstachya, Kurz ... „ 351
nervosa, *Hk. f.* ... „ 350
nigricans, *Hk. f.* ... „ 347
oblonga, *Muell.* ... „ 348
Planchoniana, *Baill.* ... „ 350
Roxburghii, *Baill.* ... „ 347
sphærocarpa, Muell. ... „ 349
stellifera, *Hk. f.* ... „ 352
Thwaitesii, Baill. ... „ 351
Tulasneana, Baill. ... „ 349
villosa, *Baill.* ... „ 345
villosula, *Kurz* ... „ 347
Wallichii, *Hk. f.* ... „ 350
sp., Griff. ... „ 353
sp., lapsu A. porosa ... i. 283
Aporum anceps, Lindl. ... v. 724
concinnum, Lindl. ... „ 724
cuspidatum, Wall. ... „ 724
indivisum, Bl. ... „ 723
indivisum, Lindl. ... „ 723
Jenkinsii, Griff. ... „ 725
Leonis, Lindl. ... „ 723
micranthum, Griff. ... „ 723
Serra, Lindl. ... „ 723
sinuatum, Lindl. ... „ 724
subteres, Griff. ... „ 726
Apostasia, *Bl.* ... vi. 174
Brunonis, Griff. ... „ 175
latifolia, *Rolfe* ... „ 175
nuda, *Br.* ... „ 175
Wallichii, *Br.* ... „ 175
Apoterium, Bl. ... i. 271
Appendicula, *Bl.* ... vi. 82
bifaria, *Lindl.* ... „ 82
callosa, *Bl.* ... „ 83
cordata, *Hk. f.* ... „ 83
cristata, Bl. ... „ 85
cyathifera, Rchb. f. ... „ 83
echinocarpa, *Hk. f.* ... „ 85
graminifolia, Teysm. & Binn. „ 85
Hasseltii, Wight ... v. 824
Kœnigii, *Hk. f.* ... vi. 84, 198
lancifolia, *Hk. f.* ... vi. 84
Lewisii, *Griff.* ... „ 83
longifolia, *Bl.* ... „ 85

Appendicula ... Vol. Page
  Maingayi, *Hk. f.* ... ... vi. 85
  reduplicata, Rchb. f. ... „ 82
  stipulata, Griff. ... ... „ 83
  teres, *Griff.* ... ... „ 85
  teres, Griff. ... ... v. 825
  torta, *Bl.* ... ... vi. 84
  xytriophora, *Rchb. f.* ... „ 84
  sp., Griff. ... ... „ 85
Apteron, *Kurz* ... ... i. 643
  lanceolatum, *Kurz* ... ... „ 643
Apteuxis trinervis, Griff. ... ii. 551
APTOSIMEÆ ... ... iv. 246, 249
Aquilaria, *Lamk.* ... ... v. 199
  Agallocha, *Roxb.* ... ... „ 199
  malaccensis, *Lamk.* ... ... „ 200
  ovata, Cav. ... ... „ 200
AQUILARIEÆ ... ... v. 192
Aquilegia, *Linn.* ... ... i. 23
  alpina, Linn. ... ... „ 24
  fragrans, Benth. ... ... „ 24
  glandulosa, Fisch. ... ... „ 24
  glauca, Lindl. ... ... „ 24
  jucunda, Fisch. & Mey. ... „ 24
  kanawarensis, Camb. ... „ 24
  Moorcroftiana, Wall. ... „ 24
  olympica, Boiss. ... ... „ 24
  pubiflora, Wall. ... ... „ 24
  pyrenaica, DC. ... ... „ 24
  viscosa, Gouan ... ... „ 24
  vulgaris, *Linn.* ... ... „ 24
  vulgaris, DC. ... ... „ 24
Aquilicia Ottilis, Gærtn. ... i. 667
  sambucina, Linn. ... ... „ 667
ARABIDEÆ ... ... i. 128
Arabis, *Linn.* ... ... i. 135
  albida, Stev. ... ... „ 136
  alpina, *Linn.* ... ... „ 135
  amplexicaulis, *Edgew.* ... „ 136
  arenosa, Linn. ... ... „ 136
  Aucheri, Boiss. ... ... „ 135
  auriculata, *Lamk.* ... ... „ 135
  glabra, *Crantz* ... ... „ 135
  glandulosa, *Kar. & Kir.* ... „ 136
  heleophila, DC. ... ... „ 140
  incanescens, Munro ... ... „ 140
  ? *leptocarpa*, Wall. ... ... „ 149
  Montbretiana, Boiss. ... „ 135
  nuda, *Belang.* ... ... „ 137
  perfoliata, Lamk. ... ... „ 135
  pterosperma, Edgew. ... „ 136
  scapigera, Boiss. ... ... „ 137
  taraxacifolia, *Anders.* ... „ 136
  Thaliana, Linn. ... ... „ 148
  Thomsoni, Hk. f. ... ... „ 136
  tibetica, *Hk. f. & T.* ... „ 136
Arachis fruticosa, Retz. ... ii. 148
  hypogæa, Linn. ... ... „ 161

Vol. Page
Arachnanthe, *Bl.* ... ... vi. 27
  bilinguis, *Benth.* ... ... „ 28
  Cathcartii, *Benth.* ... ... „ 27
  Clarkei, *Rolfe* ... ... „ 28
  Maingayi, *Hk. f.* ... ... „ 28
  moschifera, *Bl.* ... ... „ 28
Arachnis moschifera, Bl. ... vi. 28
Aracium lævigatum, Miq. ... iii. 411
Aralia, *Linn.* ... ... ii. 721
  armata, *Seem.* ... ... „ 723
  bipinnatifida, *Clarke* ... „ 722
  cachemirica, *Dcne.* ... ... „ 722
  chinensis, Linn. ... ... „ 723
  cissifolia, *Griff.* ... ... „ 722
  digitata, Roxb. ... ... „ 729
  disperma, Bl. ... ... „ 738
  foliolosa, *Seem.* ... ... „ 723
  glomerulata, Bl. ... ... „ 737
  latifolia, W. & A. ... ... „ 727
  macrophylla, Lindl. ... ... „ 722
  malabarica, *Bedd.* ... ... „ 722
  montana, Bl. ... ... „ 723
  palmata, Lour. ... ... „ 736
  parasitica, Ham. ... ... „ 724
  Pseudo-ginseng, *Benth.* ... „ 721
  Thomsonii, *Seem.* ... ... „ 723
Araliacea ? Kleinii, W. & A. i. 593
ARALIACEÆ ... ... ii. 720
Araliad, sp., Hk. f. & T. ii. 722, 723, 724, 726, 728, 729, 730, 732, 733, 734, 735, 736, 737, 738, 739, 740.
Aralidium, *Miq.* ... ... ii. 725
  pinnatifidum, *Miq.* ... ... „ 725
ARALIEÆ ... ... ii. 720
Araliopsis andamanica, Kurz ii. 735
ARAUCARIEÆ ... ... v. 644
Arceuthobium, *Rich.* ... ... v. 227
  minutissimum, *Hk. f.* ... „ 227
Archangelica, *Hoffm.* ... ... ii. 707
  decurrens, Ledeb. ... ... „ 707
  officinalis, *Hoffm.* ... ... „ 707
Archytæa, *Mart.* ... ... i. 293
  Vahlii, *Chois.* ... ... „ 294
Arctium, *Linn.* ... ... iii. 359
  Lappa, *Linn.* ... ... „ 359
Arcyphyllum, Elliott ... ... ii. 226
Ardisia, *Sw.* ... ... iii. 518
  alternata, A. DC. ... ... „ 528
  Amherstiana, A. DC. ... „ 527
  amplexicaulis, *Bedd.* ... „ 521
  anceps, Wall. ... ... „ 520
  andamanica, *Kurz* ... ... „ 521
  arborescens, Wall. ... ... „ 530
  attenuata, Wall. ... ... „ 528
  avenis, Bl. ... ... „ 512
  ? *Basaal*, R. & S. ... ... „ 515

Ardisia Vol. Page
bhotanica, *Clarke* ... iii. 528
Blumii, *A. DC.* ... „ 520
Boissieri, A. DC. ... „ 519
Brandisiana, *Kurz* ... „ 526
chrysophylloides, Miq. ... „ 521
colorata, *Roxb.* ... „ 520
complanata, Wall. ... „ 520
courtallensis, *Wight* ... „ 520
crassa, *Clarke* ... „ 518
crenata, *Roxb.* ... „ 524
crenulata, Lodd. ... „ 524
crispa, A. DC. ... „ 524
cymosa, Bl. ... „ 529
densa, Miq. ... „ 524
depressa, *Clarke* ... „ 522
divergens, *Roxb.* ... „ 521
divergens, Thw. ... „ 521
elegans, Andr. ... „ 524
elliptica, Bedd. ... „ 530
eugeniæfolia, Kurz ... „ 531
eugeniæfolia, Wall. ... „ 530
eximia, Miq. ... „ 519
floribunda, Wall. ... „ 522
Gardneri, *Clarke* ... „ 521
glabrata, Bl. ... „ 525
glandulosa, Bl. ... „ 524
glandulosa, Roxb. ... „ 533
grandiflora, Wall. ... „ 520
grandifolia, *A. DC.* ... „ 526
Griffithii, *Clarke* ... „ 523
Hasseltii, Bl. ... „ 519
Helferiana, *Kurz* ... „ 526
humilis, *Vahl* ... „ 529
hymenandra, Wall. ... „ 532
Icara, *Ham.* ... „ 523
involucrata, *Kurz* ... „ 528
jambosioides, Miq. ... „ 519
javanica, A. DC. ... „ 521
Keenani, *Clarke* ... „ 526
khasiana, *Clarke* ... „ 527
Korthalsiana, Sch. ... „ 531
Kurzii, *Clarke* ... „ 525
lanceolata, *Roxb.* ... „ 519
lentiginosa, Ker-Gawl. ... „ 524
Leschenaultii, A. DC. ... „ 519
littoralis, Andr. ... „ 530
Lobbiana, *Clarke* ... „ 529
macrocarpa, *Wall.* ... „ 524
macrophylla, Wall. ... „ 526
membranacea, *Wall.* ... „ 527
missionis, *Wall.* ... „ 519
mollis, Bl. ... „ 525
Moonii, *Clarke* ... „ 523
mucronata, Bl. ... „ 519
neriifolia, *Wall.* ... „ 522
neriifolia, A. DC. ... „ 521
neriifolia, Kurz ... „ 522

Ardisia Vol. Page
oblonga, A. DC. ... iii. 521, 528
obovata, Bl. ... iii. 530
odontophylla, *Wall.* ... „ 525
ovata, Thunb. ... „ 520
oxyantha, Wall. ... „ 532
oxyphylla, *Wall.* ... „ 528
paniculata, *Roxb.* ... „ 519
pauciflora, *Heyne* ... „ 529
pauciflora, Heyne ? ... „ 522
pedunculata, Roxb. ... „ 522
pedunculosa, *Wall.* ... „ 523
pedunculosa, Wall. ... „ 522
polycarpa, Wall. ... „ 520
polycephala, *Wall.* ... „ 529
polycephala, Wight ... „ 530
polyneura, Miq. ... „ 520
polysticta, Miq. ... „ 524
porosa, *Clarke* ... „ 522
pumila, Bl. ... „ 518
punctata, Jack ... „ 521
punctulosa, Dietr. ... „ 521
purpurea, Reinw. ... „ 519
pyramidalis, Roth ... „ 520
quinquangularis, *A. DC.* ... „ 522
reflexa, *Wall.* ... „ 527
rhomboidea, *Wight* ... „ 529
rhynchophylla, *Clarke* ... „ 529
rigida, *Kurz* ... „ 519
rostrata, Hassk. ... „ 530
Rothii, A. DC. ... „ 520
Roxburghiana, Dietr. ... „ 533
salicifolia, A. DC. ... „ 530
sanguinolenta, Bl. ... „ 520
sanguinolenta, Wall. ... „ 528
serratifolia, Bedd. ... „ 532
serrulata, Kurz ... „ 523
solanacea, Roxb. ... „ 530
speciosa, Bl. ... „ 519
? *spicata*, Wall. ... „ 518
tavoyana, A. DC. ... „ 525
Teysmanniana, Scheff. ... „ 531
thyrsiflora, D. Don ... „ 522
Tsjeriam-Cottam, R. & S. ... „ 515
tuberculata, *Wall.* ... „ 521
umbellata, Roth ... „ 530
undulata, *Clarke* ... „ 524
vestita, Wall. ... „ 525
villosa, *Roxb.* ... „ 525
virens, *Kurz* ... „ 524
Wallichii, *A. DC.* ... „ 528
Wallichii, Thw. ... „ 523
Wightiana, Wall. ... „ 530
zeylanica, *Clarke* ... „ 520
Zollingeri, A. DC. ... „ 520
sp., Griff. ... „ 524
sp., Hk. f. & T. iii. 519, 523, 524, 527, 528, 529.

Vol. Page
Areca, *Linn.* ... ... vi. 405
  augusta, Kurz ... ... ,, 414
  Catechu, *Linn.* ... ... ,, 405
  concinna, *Thw.* ... ... ,, 406
  costata, Kurz ... ... ,, 409
  curvata, Griff. ... ... vi. 408, 411
  Dicksonii, Roxb. ... ... vi. 409
  disticha, Roxb. ... ... ,, 408
  Faufel, Gærtn. ... ... ,, 405
  gracilis, Roxb. ... ... ,, 407
  hæmatocarpa, Griff. ... ... ,, 410
  hexasticha, Kurz ... ... ,, 406
  horrida, Griff. ... ... ,, 415
  hortensis, Lour. ... ... ,, 405
  humilis, Roxb ... ... ,, 408
  malaiana, Griff. ... ... ,, 410
  nagensis, *Griff.* ... ... ,, 406
  Nenga, Bl. ... ... ,, 412
  Nibung, Mart. ... ... ,, 414
  oryzæformis, Gærtn. ... ,, 409
  paradoxa, Griff. ... ... ,, 411
  pumila, Bl. ... ... ,, 412
  tigillaria, Jack ... . ,, 414
  triandra, *Roxb.* ... ... ,, 406
  triandra, Roxb.? ... ... ,, 407
  Wallichiana, Mart. ... ... ,, 416
  sp., Griff. ... ... vi. 407, 410
ARECEÆ ... ... vi. 403
Arenaria, *Linn.* ... ... i. 235
  Benthami, *Edgew.* .. ... ,, 242
  ciliolata, *Edgew.* ... ... ,, 240
  debilis, *Hk. f.* ... ... ,, 242
  densissima, *Wall.* ... ... ,, 239
  festucoides, *Benth.* ... ... ,, 236
  flaccida, Roxb. ... ... ,, 243
  foliosa, *Royle* ... ... ,, 236
  glanduligera, *Edgew.* ... ,, 240
  globiflora, *Wall.* ... ... ,, 238
  Griffithii, *Boiss.* ... ... ,, 237
  holosteoides, *Edgew.* ... ,, 241
  ? *imbricata*, M. Bieb. ... ,, 237
  juniperina, Fenzl ... ... ,, 236
  kashmirica, *Edgew.* ... ,, 236
  melandryoides, *Edgew.* ... ,, 241
  Meyeri, *Boiss.* ... ... ,, 236
  monticola, *Edgew.* ... ... ,, 238
  musciformis, *Wall.* ... . ,, 237
  neelgerrensis, *W. & A.* ... ,, 239
  orbiculata, *Royle* ... ... ,, 240
  oreophila, *Hk. f.* ... ... ,, 238
  polytrichoides, *Edgew.* ... ,, 237
  pulvinata, *Edgew.* ... ... ,, 238
  rotundifolia, M. Bieb. ... ,, 240
  rubra, Linn. ... ... ,, 244
  rupifraga (rupicola), Fenzl ,, 243
  serpyllifolia, *Linn.* ... ... ,, 239
  Stracheyi, *Edgew.* ... ... ,, 240

Arenaria Vol. Page
  tenera, *Edgew.* ... ... i. 242
  trichotoma, *Royle mss.* ... ,, 235
  Wallichiana, Ser. ... ... ,, 239
Arenga, *Labill.* ... ... vi. 421
  Griffithii, Seem. ... ... ,, 421
  obtusifolia, *Mart.* ... ... ,, 421
  saccharifera, *Labill.* ... ,, 421
  Westerhoutii, Griff. ... ... ,, 421
  Wightii, *Griff.* ... ... ,, 422
Arethusa bengalensis, Hort. vi. 122
  ecristata, Griff. ... ... ,, 122
  plicata, Andr. ... . ,, 119
Argemone, *Linn.* ... ... i. 117
  mexicana, *Linn.* ... ... ,, 117
Argostemma, *Wall.* ... ... iii. 42
  acutum, Wall. ... ... ,, 43
  calycinum, Br. ... ... ,, 47
  connatum, Dalz. ... ... ,, 43
  courtallense, *Arn.* ... ... ,, 42
  Elatostemma, *Hk. f.* ... ,, 45
  glaberrimum, Dalz. ... ... ,, 43
  humile, *Wall.* ... ... ,, 44
  inæquilaterum, *Benn.* ... ,, 46
  khasianum, *Clarke* ... ... ,, 43
  Kurzii, *Clarke* ... ... ,, 45
  Lobbii, *Hk. f.* ... ... ,, 44
  oligantha, Kurz ... ... ,, 46
  ophirense, *Maingay* ... ,, 45
  Parishii, *Hk. f.* ... ... ,, 44
  parvifolium, *Benn.* ... ... ,, 45
  pictum, *Wall.* ... ... ,, 43
  pumilum, *Benn.* ... ... ,, 44
  rostratum, *Wall.* ... .. ,, 44
  sarmentosum, *Wall.* ... ,, 42
  soneriloides, *Kurz* ... ... ,, 46
  spinulosum, *Clarke* ... ... ,, 46
  tavoyanum, *Wall.* ... ... ,, 43
  unifolium, *Benn.* ... ... ,, 45
  unifolium, Kurz ... ... ,, 45
  verticillatum, *Wall.* ... ,, 43
  verticillatum, Wall. ... ... ,, 43, 44
Argyreia, *Lour.* ... ... iv. 184
  acuta, Lour. ... ... ,, 186
  aggregata, Chois. ... ... ,, 191
  alulata, Miq. ... ... ,, 212
  ampla, Chois. ... ... ,, 185
  argentea, *Chois.* ... ... ,, 185
  barbigera, Chois. ... ... ,, 194
  Bona-nox, Sweet ... ... ,, 184
  bracteata, *Chois.* ... ... ,, 188
  capitata, Brand. ... ... ,, 193
  capitata, Chois.... ... ... ,, 193
  capitata, Kurz ... ... ,, 193
  Choisyana, *Wight* ... ... ,, 190
  Choisyana, Wight ... ... ,, 189
  courtallensis, Wight... ... ,, 189
  cuneata, *Ker* ... ... ,, 191

Argyreia ... Vol. Page
cymosa, *Sweet* ... iv. 190
Daltoni, *Clarke* ... „ 190
elliptica, Chois. ... „ 192
festiva, Wall. ... „ 185
fulgens, *Chois.* ... „ 191
hancorniæfolia, Gardn. ... „ 196
hirsuta, *Arn.* ... „ 189
Hookeri, *Clarke* ... „ 185
involucrata, *Clarke* ... „ 187
lanceolata, *Chois.* ... „ 186
Lawii, *Clarke* ... „ 190
Leschenaultii, *Chois.* ... „ 188
Leschenaultii, Thw. ... „ 188
malabarica, *Chois.* ... „ 189
nellygherya, *Chois.* ... „ 189
obtecta, *Clarke* ... „ 186
obtusifolia, Lour. ... „ 186
ornata, Sweet ... „ 183
osyrensis, Chois. ... „ 192
pilosa, *Arn.* ... „ 189
pomacea, *Chois.* ... „ 188
populifolia, *Chois.* ... „ 187
populifolia, Chois. ... „ 186
Roxburghii, *Chois.* ... „ 185
Roxburghii, Chois. ... „ 195
rubicunda, Chois. ... „ 195
sericea, *Dalz. & Gibs.* ... „ 188
setosa, Chois. ... „ 194
speciosa, *Sweet* ... „ 185
splendens, *Sweet* ... „ 186
tiliæfolia, *Wight* ... „ 184
tomentosa, Chois. ... „ 192
uniflora, Sweet ... „ 184
venusta, Chois. ... „ 185
Wallichii, *Chois.* ... „ 187
zeylanica, Kurz ... iv. 187, 196
sp., Hk. f. & T. ... iv. 185, 187, 189, 190, 192, 194, 195
Argyrolobium, *Eckl. & Zeyh.* ii. 63
divaricatum, J. & S. ... „ 63
flaccidum, *J. & S.* ... „ 63
Kotschyi, Boiss. ... „ 64
ornithopodioides, J. & S. „ 64
roseum, *J. & S.* ... „ 64
Aria kumaonensis, Dcne. ... ii. 375
lanata, Dcne. ... „ 375
Arillaria robusta, Kurz ... ii. 252
ARINEÆ ... vi. 490
Ariopsis, *Nimmo* ... vi. 519
peltata, *Nimmo* ... „ 519
protanthera, N. E. Br. ... „ 519
Arisæma, *Mart.* ... vi. 497
abbreviatum, Schott ... „ 503
affine, Schott ... „ 505
album, *N. E. Br.* ... „ 498
alienatum, Schott ... „ 505
anomalum, *Hemsl.* ... „ 498

Arisæma ... Vol. Page
caudatum, *Engl.* ... vi. 508
commutatum, Schott ... „ 502
concinnum, *Schott* ... „ 505
consanguineum, *Schott* ... „ 505
cornutum, Schott ... „ 506
costatum, *Mart.* ... „ 501
costatum, Wall. ... „ 500
curvatum, Kunth ... „ 502
cuspidatum, Engl. ... „ 497
decipiens, *Schott* ... „ 503
dolosum, Schott ... „ 500
echinatum, *Schott* ... „ 506
eminens, Schott ... „ 500
erubescens, *Schott* ... „ 506
? *erubescens*, Dalz. & Gibs. „ 504
exile, *Schott* ... „ 506
filicaudatum, *N. E. Br.* ... „ 507
filiforme, Thw. ... „ 504
fimbriatum, *Mast.* ... „ 502
flavum, *Schott* ... „ 503
fraternum, *Schott* ... „ 507
galeatum, *N. E. Br.* ... „ 502
? *gracile*, Kunth ... „ 512
Griffithii, *Schott* ... „ 499
helleborifolium, Schott ... „ 502
? *heptaphyllum*, Bl. ... „ 508
Hookeri, Schott ... „ 499
Hookerianum, Schott ... „ 499
Huegelii, Schott ... „ 504
intermedium, *Bl.* ... „ 500
Jacquemontii, *Bl.* ... „ 505
Jacquemontii, Engl ... „ 507
Kunstleri, *Hk. f.* ... „ 497
Leschenaultii, *Bl.* ... „ 504
Leschenaultii, Engl. ... „ 507
mirabile, Schott ... „ 500
Murrayi, *Hk.* ... „ 507
neglectum, *Schott* ... „ 504
nepenthoides, *Mart.* ... „ 504
ochraceum, *Schott* ... „ 507
papillosum, Steud. ... „ 504
? *pentaphyllum*, Schott ... „ 508
petiolulatum, *Hk. f.* ... „ 498
Prazeri, *Hk. f.* ... „ 501
propinquum, *Schott* ... „ 501
pulchrum, *N. E. Br.* ... „ 505
? *pumilum*, Bl. ... „ 509
Roxburghii, *Kunth* ... „ 497
Scortechinii, *Hk. f.* ... „ 503
speciosum, *Mart.* ... „ 500
Steudelii, Schott ... „ 502
Stracheyanum, Schott ... „ 500
tortuosum, *Schott* ... „ 502
utile, *Hk. f.* ... „ 499
verrucosum, *Schott* ... „ 499
vituperatum, Schott ... „ 506
Wallichianum, *Hk. f.* ... „ 500

Arisæma Vol. Page
Wattii, *Hk. f.* ... ... vi. 498
Wightii, *Schott*... ... ... „ 507
Wightii, Hook.... ... ... „ 504
Wrayi, *Hemsl.* ... ... „ 503
sp., Wall. ... ... vi. 498, 502, 504, 505, 506, 510
Arisarum amboinense, Rumph vi. 510
Ariseia (vide *Aniseia*) *Afzelii*, G. Don ... ... iv. 217
bracteata, Hassk. ... ... „ 217
Aristaria barbata, Jungh. ... vii. 211
mutica, Hassk.... ... ... „ 217
Aristega lævifolia, Miers ... i. 101
Aristida, *Linn.* ... ... vii. 223
abyssinica, Trin. & Rupr. „ 224
Adscenscionis, *Linn.* ... „ 224
Adscenscionis, Trim. (*adscendens*) ... ... „ 225
æthiopica, Trin. & Rupr.... „ 225
articulata, Edgew. ... ... „ 226
arundinacea, Roem.... ... „ 225
arundinacea, Wall. ... ... „ 242
brachypoda, Tausch. ... „ 228
cærulescens, Desf. ... ... „ 224
canariensis, Willd. ... ... „ 224
capillacea, Cav.... ... ... „ 224
chætophylla, Steud.... ... „ 224
ciliata, Steud. & Hochst. „ 228
cœrulescens, Thw. ... ... „ 225
Cumingiana, *Trin. & Rupr.* „ 224
curvata, Nees ... ... „ 224
cyanantha, *Steud.* ... ... „ 225
decorata, Steud. ... ... „ 228
delicatula, Hochst. ... ... „ 224
depressa, Retz. ... ... vii. 224, 227
divaricata, Jacq. ... ... vii. 224
Ehrenbergii, Trin. & Rupr. „ 225
elatior, Cav. ... ... „ 224
festucoides, Hochst.... ... „ 224
festucoides, Poir. ... ... „ 225
Forskahlii, Tausch.... ... „ 228
funicularis, Trin. ... ... „ 226
funiculata, *Trin. & Rupr.* „ 226
funiculata, Boiss. ... ... „ 227
gigantea, Linn. f. ... ... „ 225
Heymannii, Regel ... ... „ 225
hirtigluma, *Steud.* ... ... „ 227
hystricula, *Edgew.* ... ... „ 227
Hystrix, *Linn. f.* ... ... „ 225
Hystrix, Baker ... ... „ 225
Hystrix, Duthie ... ... „ 225
Jacquiniana, Tausch. ... „ 225
Kotschyi, Hochst. ... ... „ 226
Kunthiana, Trin. & Rupr. „ 226
lanata, Forsk. ... ... „ 228
linearifolia, Rottl. ... ... „ 300
macrathera, A. Rich. ... „ 226
Aristida Vol. Page
mallica, Edgew. ... ... vii. 226
meccana, Trin. & Rupr. ... „ 226
modatica, Steud. ... ... „ 224
montana, Rottl.... ... ... „ 242
murina, Aitch.... ... ... „ 226
mutabilis, *Trin. & Rupr.* „ 226
mutabilis, Trin. & Rupr.... „ 225
nutans, Willd. ... ... „ 225
paniculata, Forsk. ... ... „ 225
paradisea, Edgew. ... ... „ 228
paradoxa, Schmidt ... ... „ 226
pilosa, Heyne ... ... „ 226
plumosa, *Linn.*... ... ... „ 228
pogonoptila, Boiss. ... ... „ 228
pumila, Dcne. ... ... „ 225
pusilla, Trin. & Rupr. ... „ 225
quinqueseta, Steud.... ... „ 225
Raddiana, Savi ... ... „ 228
redacta, *Stapf* ... ... „ 227
rigida, Heyne ... ... „ 228
rigescens, *R. & S.* ... ... „ 228
Royleana, Trin. & Rupr. vii. 226, 227
Schimperi, Hochst. & Steud. vii. 228
Schweinfurthii, Boiss. ... „ 226
setacea, *Retz.* ... ... „ 225
setacea, Trin. ... ... „ 225
simplicissima, Steud. ... „ 224
spicata, Rottl. ... ... „ 226
spicigera, Trin. & Rupr.... „ 225
stipacea, Ehrenb. & Hempr. „ 227
tenella, Kurz ... ... „ 224
Teneriffæ, Steud. ... ... „ 224
tenuis, Hochst.... ... ... „ 226
trichodes, Walp... ... ... „ 224
tripilis, Thunb.... ... ... „ 226
vulgaris, Trin. & Rupr. ... „ 225
sp., Wall. ... ... vii. 225, 227
Aristolochia, *Linn.* ... ... v. 74
abyssinica, Klotz. ... ... „ 75
acuminata, Duchart. ... „ 76
acuminata, Roxb. ... ... „ 75
atropurpurea, *Parish* ... „ 76
bracteata, *Retz.* ... ... „ 75
bracteolata, Lamk. ... ... „ 75
Cathcartii, *Hk. f.* ... ... „ 77
Griffithii, *Hk. f. & T.* ... „ 77
indica, *Linn.* ... ... „ 75
Kotschyi, Hochst. ... ... „ 75
lanceolata, Wight ... ... „ 75
mauritiana, Pers. ... ... „ 75
maurorum, Klotz. ... ... „ 75
maysorensis, Fisch. ... ... „ 75
pandurata, Wall. ... ... „ 75
platanifolia, *Duchart.* ... „ 76
Roxburghiana, *Klotz.* ... „ 75
saccata, *Wall.* ... ... „ 76
Thwaitesii, Hook. ... ... „ 77

Aristolochia Vol. Page
trilobata, Linn. ii. 600
sp., Griff. v. 75, 77
sp., Wall. v. 73
ARISTOLOCHIACEÆ v. 72
Arnebia, *Forsk.* iv. 175
echioides, Hook. „ 176
Griffithii, *Boiss.* iv. 176, 734
hispidissima, *DC.* iv. 176
perennis, A. DC. „ 177
Thomsoni, *Clarke* „ 176
tibetana, *Kurz* „ 176
tingens, A. DC. „ 177
sp., Hk. f. & T. „ 176
Arnica nivea, Wall. iii. 390
piloselloides, Linn. „ 390
Aroid, Wall. vi. 495, 518, 519, 520, 521, 522, 523, 524, 525, 529, 530, 533, 534, 536, 537.
AROIDEÆ vi. 490
Arrhynchium labrosum, Lindl. vi. 28
Arsis rugosa, Lour. i. 393
Artabotrys, *Br.* i. 53
burmanicus, *A. DC.* „ 55
caudatus, *Wall.* „ 55
crassifolius, *Hk. f. & T.* „ 54
hamatus, Bl. „ 54
Kurzii, *Hk. f. & T.* „ 54
Maingayi, *Hk. f. & T.* „ 55
malayanus, Griff. „ 83
odoratissimus, *Br.* „ 54
pleurocarpus, *Maing.* „ 54
speciosus, *Kurz* „ 55
suaveolens, *Bl.* „ 55
zeylanicus, *Hk. f. & T.* „ 54
Artanema, *D. Don* iv. 274
angustifolium, *Benth.* „ 275
sesamoides, *Benth.* „ 274
Artemisia, *Linn.* iii. 321
Absinthii, Heyne „ 329
Absinthium, *Linn.* „ 328
acetica, Jacq. „ 324
affinis, Hassk. „ 325
amygdalina, *Dcne.* „ 325
annua, *Linn.* „ 323
anomala, Hance „ 325
biennis, *Willd.* „ 324
brevifolia, Wall. „ 324
Campbellii, *Hk. f. & T.* „ 327
caruifolia, *Ham.* „ 324
cuneifolia, DC. „ 322
desertorum, *Spreng.* „ 322
Dracunculus, *Linn.* „ 321
dubia, Wall.? „ 322
dubia, Wall. „ 325
elegans, Roxb. „ 323
Falconeri, *Clarke* „ 328
fasciculata, Hk. f. & T. „ 318
Artemisia Vol. Page
fœtida, Jacq. iii. 322
fragrans, Willd. „ 324
glabrata, DC. „ 322
glauca, *Pall.* „ 322
Gmelini, Bess. „ 330
grata, Wall. iii. 325, 326
Griffithiana, Boiss. iii. 329
Halimodendron, Ledeb. „ 321
hemisphærica, Roxb. „ 316
hirsuta, Rottl. „ 246
hypoleuca, Edgew. „ 326
hypoleuca ?, Hk. f. & T. „ 327
indica, Willd. „ 325
Jacquemontiana, Bess. „ 322
kohatica, Klatt „ 330
laciniata, *Willd.* „ 326
lavandulæfolia, DC. „ 325
Lehmaniana, Bunge. „ 324
leptophylla, D. Don „ 330
leptostachya, DC. „ 325
macrocephala, *Jacq.* „ 329
maderaspatana, Roxb. „ 247
maritima, *Linn.* „ 323
Messerschmidiana, Bess. „ 327
minima, Linn. „ 317
minor, *Jacq.* „ 329
mollissima, *D. Don* „ 330
Moorcroftiana, *Wall.* „ 327
myriantha, Wall. „ 325
nilotica, Linn. „ 316
nubigena, Wall. „ 319
nutans, Willd. „ 324
pallens, Wall. „ 329
pallida, Salisb. „ 329
paniculata, Roxb. „ 325
parviflora, *Roxb.* „ 322
parviflora, Wight „ 325
persica, *Boiss.* „ 327
pontica, Linn. „ 330
purpurascens, Jacq. „ 326
revoluta, Edgew. „ 326
riparia, Ham. „ 324
Roxburghiana, *Bess.* „ 326
Royleana, *DC.* „ 329
sacrorum, *Ledeb.* „ 326
salsoloides, *Willd.* „ 321
scoparia, *Waldst. & Kit.* „ 323
Siversiana, *Willd.* „ 329
sternutatoria, Roxb. „ 317
Stewartii, Clarke „ 323
Stracheyi, *Hk. f. & T.* „ 328
stricta, *Edgew.* „ 323
tenuiflora, Jacq. „ 319
tibetica, Hk. f. & T. „ 329
Tournefortiana, *Rchb.* „ 324
trichophylla, Wall. „ 323
vestita, *Wall.* „ 326

Artemisia Vol. Page
vulgaris, *Linn.* ... iii. 325
Wadei, Edgew. ... „ 323
Wallichiana, Bess. ... „ 326
Arthratherum ciliatum, Nees vii. 228
elatum, Boiss. ... „ 228
hirtiglume, J. & S. ... „ 228
Kotschyi, Hochst. ... „ 227
plumosum, Nees ... „ 228
pogonoptilum, J. & S. ... „ 228
rigidum, Schult. ... „ 228
Royleanum, Edgew. ... „ 227
Schimperi, Nees ... „ 228
Arthraxon, *Beauv.* ... vii. 143
breviaristatus, *Hack.* ... „ 144
ciliaris, *Beauv.* ... „ 145
ciliaris, Beauv. ... „ 146
ciliaris, Hack. ... „ 145
coloratus, Hochst. ... „ 146
cuspidatus, Hochst. ... „ 146
echinatus, Hochst. ... „ 143
gracilis, Hochst. ... „ 146
inermis, *Hk. f.* ... „ 145
japonicus, Miq. ... „ 146
jubatus, *Hack.* ... „ 147
lanceolatus, *Hochst.* ... „ 143
lanceolatus, Hochst. ... „ 146
lancifolius, Hochst. ... „ 147
Langsdorfianus, Hochst. ... „ 146
lasiocoleos, Hochst. ... „ 146
major, Hochst. ... „ 146
micans, Hochst. ... „ 146
microphyllus, *Hochst.* ... „ 147
microphyllus, Hochst. ... „ 147
minor, Hochst. ... „ 147
nudus, Benth. ... „ 146
nudus, Hochst. ... „ 146
rudis, *Hochst.* ... „ 144
Schimperi, Hochst. ... „ 146
Schmidtii, Hochst. ... „ 146
serrulatus, Hochst. ... „ 143
spathaceus, *Hk. f.* ... „ 145
submuticus, *Hochst.* ... „ 144
submuticus, Hack. ... „ 145
violaceus, Hochst. ... „ 146
sp. Wall. ... vii. 117, 144, 145, 146
Arthrocnemum, *Moq.* ... v. 11
fruticosum, Moq. ... „ 12
? **glaucum**, *Ung.* ... „ 12
indicum, *Moq.* ... „ 12
indicum, Thw. ... „ 12
Arthromischus armatus, Thw. i. 511
Arthrophyllum, *Bl.* ... ii. 733
alternifolium, Maingay ... „ 734
Blumeanum, Zoll. & Mor. „ 734
diversifolium, *Bl.* ... ii. 727, 733
ellipticum, Bl. ... ii. 734
javanicum, Bl. ... „ 734

Arthrophyllum Vol. Page
ovalifolium, Jungh. ... ii. 734
pinnatum, *Clarke* ... „ 734
pinnatum, Maingay ... „ 734
Arthrosprion stipulatum, Hassk. ... ii. 300
? *Arthrostachys gracilis*, Desv. vii. 210
Arthrostemma paniculatum, D. Don ... ii. 525
Arthrostylis chinensis, Benth. vi. 651
filiformis, Thw. ... „ 650
ARTOCARPEÆ ... v. 478
Artocarpus, *Forst.* ... v. 539
bracteatus, *King* ... „ 540
calophylla, *Kurz* ... „ 540
Chaplasha, *Roxb.* ... „ 543
cuspidata, Griff. ... „ 540
Dadah, Miq. ... „ 542
Denisoniana, *King* ... „ 544
echinata, Roxb. ... „ 540
elongatus, Miq. ... „ 493
Forbesii, *King* ... „ 539
Gomeziana, *Wall.* ... „ 544
hirsuta, *Lamk.* ... „ 541
incisa, Linn. f. ... „ 539
integrifolia, *Linn. f.* ... „ 541
Kunstleri, *King* ... „ 540
Lakoocha, *Roxb.* ... „ 543
lanceæfolia, *Roxb.* ... „ 543
lanceæfolia, Roxb. ... i. 309
Lowii, *King* ... „ 542
Maingayi, *King* ... „ 542
mollis, Wall. ... „ 543
nobilis, *Thw.* ... „ 542
peduncularis, *Kurz* ... „ 541
Polyphema, *Pers.* ... „ 542
pomiformis, Teysm. & Binn. „ 544
pubescens, Willd. ... „ 541
pubescens, Moon ... „ 543
rigida, *Bl.* ... „ 540
rigida, Wall. ... „ 544
rufescens, Kurz ... „ 540
Scortechinii, *King* ... „ 542
Tampang, Miq. ... „ 540
tephrophylla, Miq. ... „ 544
Arum, *Linn.* ... vi. 509
angulatum, Griff. ... „ 512
bulbiferum, Roxb. ... „ 515
campanulatum, Roxb. ... „ 513
clavatum, Desf. ... „ 508
Colocasia, Linn. ... „ 523
costatum, Wall. ... vi. 500, 501
crenatum, Wight ... vi. 512
cucullatum, Lour. ... „ 525
curvatum, Roxb. ... „ 502
cuspidatum, Bl. ... „ 512
cuspidatum, Roxb. ... „ 497
divaricatum, Linn. ... „ 510

Arum ... Vol. Page
divaricatum, Thw. ... ... vi. 513
echinatum, Wall. ... ... „ 506
erubescens, Wall. ... ... „ 506
flagelliforme, Lodd. ... ... „ 512
flavum, Forsk. ... ... „ 503
fornicatum, Roxb. ... ... „ 526
gracile, Roxb. ... ... „ 512
grandiflorum, Ham. ... ... „ 518
Griffithii, Schott ... ... „ 509
guttatum, Wall. ... ... „ 508
indicum, Roxb. ... ... „ 525
integrifolium, Link ... ... „ 529
Jacquemontii, *Bl.* ... ... „ 509
lyratum, Roxb. ... ... „ 517
macrorrhizon, Linn. ... ... „ 526
margaritifer, Roxb. ... ... „ 519
minutum, Willd. ... ... „ 513
montanum, Roxb. ... ... „ 525
mucronatum, Spreng. ... „ 513
Murrayi, Grah. ... ... „ 507
nepenthoides, Wall. ... ... „ 504
nymphæifolium, Roxb. ... „ 523
occultatum, Ham. ... ... „ 515
odorum, Roxb. ... ... „ 526
orixense, Roxb. ... ... „ 509
ovatum, Linn. ... ... „ 495
pedatum, Willd. ... ... „ 508
peltatum, Lam. ... ... „ 523
pentaphyllum, Linn. ... ... „ 508
peregrinum, Linn. ... ... „ 526
? *pumilum*, Lamk. ... ... „ 509
Rumphii, Gaud. ... ... „ 514
sessiliflorum, Roxb. ... ... „ 508
speciosum, Wall. ... ... „ 500
spirale, Grah. ... ... „ 494
spirale, Retz. ... ... „ 494
sylvaticum, Roxb. ... ... „ 518
taccoides, Ham. ... ... „ 515
tortuosum, Wall. ... ... „ 502
trilobatum, Bot. Mag. ... „ 510
trilobatum, Linn. ... ... „ 509
trilobatum, Roxb. ... ... „ 510
venosum, Lindl. ... ... „ 508
viviparum, Roxb. ... ... „ 522
sp., Griff. ... ... „ 520
Arundina, *Bl.* ... ... v. 856
affinis, Griff. ... ... „ 857
bambusifolia, *Lindl.* ... „ 857
Cantleyi, *Hk. f.* ... ... 858, vi. 195
chinensis, *Bl.* ... ... v. 857
densa (densiflora), *Lindl.* „ 857
minor, *Lindl.* ... ... „ 857
revoluta, *Hk. f.* ... ... „ 858
? *speciosa*, Bl. ... ... „ 857
Wallichii, *Rchb. f.* ... ... „ 858
Arundinacea, Griff. ... ... vii. 305
Arundinaria, *Michx.* ... ... vii. 376

Arundinaria ... Vol. Page
aristata, *Gamble* ... ... vii. 382
armata, *Gamble* ... ... „ 385
callosa, *Munro* ... ... „ 380
callosa, Munro ... ... „ 385
debilis, *Thw.* ... ... „ 378
densifolia, *Munro* ... ... „ 379
elegans, *Kurz* ... ... „ 378
falcata, *Nees* ... ... „ 381
Falconeri, *Benth.* ... ... „ 383
floribunda, *Thw.* ... ... „ 377
Gallatlyi, *Gamble* ... ... „ 384
Gammieana, Gamble ... „ 379
glaucescens, Beauv. ... ... „ 391
Griffithiana, *Munro* ... ... „ 379
hirsuta, *Munro* ... ... „ 384
hispida, Steud. ... ... „ 377
Hookeriana, *Munro* ... ... „ 382
intermedia, *Munro* ... ... „ 381
jaunsarensis, *Gamble* ... „ 384
khasiana, *Munro* ... ... „ 381
Kurzii, *Gamble* ... ... „ 385
Mannii, *Gamble* ... ... „ 385
microphylla, *Munro* ... ... „ 383
moliniformis, Hochst. ... „ 377
Pantlingi, *Gamble* ... ... „ 380
polystachya, *Kurz* ... ... „ 378
Prainii, *Gamble* ... ... „ 383
procera, Wall. ... ... „ 382
racemosa, *Munro* ... ... „ 379
Rolloana, *Gamble* ... ... „ 384
spathiflora, *Trin.* ... ... „ 382
suberecta, *Munro* ... ... „ 385
? *utilis*, Clegh. ... ... „ 381
Walkeriana, *Munro* ... ... „ 377
Wightiana, *Nees* ... ... „ 377
sp., Lisboa ... ... „ 70
Arundinella, *Raddi* ... ... vii. 68
agrostoides, *Trin.* ... ... „ 71
avenacea, *Munro* ... ... „ 69
birmanica, *Hk. f.* ... ... „ 73
blepharipbylla, *Trim.* ... „ 77
brasiliensis, *Raddi* ... ... „ 73
Campbelliana, Lisboa ... „ 69
capillaris, *Hk. f.* ... ... „ 74
ciliata, Nees ... ... „ 71
Clarkei, *Hk. f.* ... ... „ 75
Ecklonii, Nees ... ... „ 73
fuscata, *Nees* ... ... „ 74
gigantea, *Dalz.* ... ... „ 76
hirsuta, Nees ... ... „ 70
holcoides, Trin. ... ... „ 71
Hookeriana, W. & A. ... „ 264
Hookerii, Munro ... ... „ 73
indica, Trin. ... ... „ 77
japonica, Duthie ... ... „ 77
khaseana, *Nees* ... ... „ 71
Lawsoni, *Hk. f.* ... ... „ 76

Arundinella Vol. Page
laxiflora, *Hk. f.* ... ... vii. 75
leptochloa, *Hk. f.* ... ... ,, 76
martinicensis, Trin. ... ... ,, 73
mesophylla, *Nees* ... ... ,, 69
Metzii, *Hochst.* ... ... ,, 72
Mikani, Nees ... ... ,, 73
mutica, Nees ... ... ,, 74
nepalensis, Trin. ... ... ,, 73
nervosa, *Nees* ... ... vii. 70, 242
nervosa, Duthie... ... ... ,, 70
nervosa, Thw. ... ... ,, 75
pallida, Nees ... ... ,, 73
pilosa, Hochst. ... ... ,, 71
pumila, Steud. ... ... ,, 71
purpurea, Hochst. ... ... ,, 74
pygmea, *Hk. f.* ... ... ,, 72
rigida, Nees ... ... ,, 73
Ritchiei, Munro... ... ... ,, 73
Schultzii, Benth. ... ... ,, 64
setifera, Steud. ... ... ,, 70
setosa, *Trin.* ... ... ,, 70
spicata, *Dalz.* ... ... ,, 77
stricta, Nees ... ... ,, 70, 73
tenella, *Nees* ... ... ,, 71
Thwaitesii, *Hk. f.* ... ... ,, 77
tuberculata, *Munro*... ... ,, 69
villosa, *Arn.* ... ... ,, 72
Wallichii, *Nees* ... ... ,, 75
? *sp.*, Wall. vii. 69, 70, 71, 72, 73, 75
Arundo, *Linn.* ... ... vii. 302
Bambos, Linn. ... ... ,, 395
bambusifolia, Griff. ... ... ,, 303
bengalensis, Retz. ... ... ,, 303
bifaria, Retz. ... ... ,, 303
colorata, Ait. ... ... ,, 221
corea, Rottl. ... ... ,, 304
Donax, *Linn.* ... ... ,, 302
Donax, Ham. ... ... ,, 304
Epigejos, Linn.... ... ... ,, 260
glauca, M. Bieb. ... ... ,, 261
graeca, Link ... ... ,, 304
Karka, Retz. ... ... ,, 304
laxa, R. & S. ... ... ,, 261
littorea, Schrad. ... ... ,, 261
longifolia, Salisb. ... ... ,, 303
madagascariensis, Kunth... ,, 305
mauritanica, Poir. ... ... ,, 303
maxima, Forsk.... ... ... ,, 304
montana, Ham.... ... ... ,, 61
Phragmitis, Linn. ... ... ,, 304
Pliniana, Griseb. ... ... ,, 303
Reynaudiana, Kunth ... ,, 305
Roxburghiana, Kunth ... ,, 304
Roxburghii, Kunth ... ... ,, 304
sativa, Lamk. ... ... ,, 303
sylvatica, Schrad. ... ... ,, 266
? *tecta*, Blanc. ... ... ,, 304

Arundo Vol. Page
tibialis, Roxb. ... ... vii. 304
triflora, Roxb. ... ... ,, 303
vulgaris, Lamk.... ... ... ,, 304
Zollingeri, Buese ... ... ,, 305
sp., Wall ... ... vii. 303, 304, 305
Arytera ? macrocarpa, Miq. i. 528
Asarum, *Linn.* ... ... v. 72
himalaicum, *Hk. f. & T.* ,, 72
Ascaricida indica, Cass. ... iii. 237
Ascarina serrata, Bl. ... ... v. 100
ASCLEPIADEÆ ... ... iv. 1
Asclepias, *Linn.* ... ... iv. 18
acida, Roxb. ... ... ,, 26
acuminata, Roxb. ... ... ,, 30
annularis, Roxb. ... ... ,, 21
aphylla, Roxb. ... ... ,, 26
asthmatica, Willd. ... ... ,, 45
curassavica, *Linn.* ... ... ,, 18
dichotoma, Rottl. ... ... ,, 42
echinata, Herb. Madr. ... ,, 35
echinata, Roxb.... ... ... ,, 20
geminata, Roxb. ... ... ,, 29
gigantea, Willd.... ... ... ,, 17
herbacea, Roxb.... ... ... ,, 18
lactifera, Linn. ... ... ,, 31
laurifolia, Roxb. ... ... ,, 16
longistigma, Roxb. ... ... ,, 14
microphylla, Roxb. ... ... ,, 20
? *montana*, Roxb. ... ... ,, 32
odoratissima, Roxb. ... ... ,, 38
pallida, Roxb. ... ... ,, 38
parasitica, Roxb. ... ... ,, 57
pendula, Roxb. ... ... ,, 61
procera, Bot. Reg. ... ... ,, 18
Pseudo-sarsa, Roxb. ... ... ,, 5
pulchella, Roxb. ... ... ,, 19
racemosa, Roxb. ... ... ,, 46
rosea, Roxb. ... ... ,, 17
spiralis, Forsk. ... ... ,, 20
Sussuela, Roxb. ... ... ,, 59
tenacissima, Roxb. ... ... ,, 35
tenuis, Heyne ... ... ,, 41
tenuissima, Roxb. ... ... ,, 42
tinctoria, Roxb.... ... ... ,, 34
tingens, Roxb. ... ... ,, 31
tomentosa, Herb. Madr. ... ,, 35
tuberosa, Roxb.... ... ... ,, 63
tunicata, Hort. Calc. ... ,, 45
tunicata, Roxb.... ... ... ,, 23
Vincetoxicum, Linn.... ... ,, 22
volubilis, Herb. Madr. ... ,, 63
volubilis, Linn. f. ... ... ,, 46
vomitoria, Koen. ... ... ,, 45
Ascolepis kyllingioides, Steud. vi. 668
tenuior, Steud. ... ... ,, 663
Ascyrum, *Linn.* ... ... i. 252
filicaule, *Dyer* ... ... ,, 252

Vol. Page
Asiphonia piperiformis, Griff. v. 73
Aspalathus cuneata, D. Don. ii. 142
indica, *Linn.* „ 94
ASPARAGEÆ vi. 300
Asparagopsis abyssinica, Kunth vi. 316
acerosa, Kunth „ 317
adscendens, Kunth „ 318
Brownei, Kunth vi. 316, 317
Curilla, Kunth vi. 318
Decaisnei, Kunth „ 316
floribunda, Kunth „ 316
Hohenackeri, Kunth „ 316
javanica, Miq. „ 317
rubricaulis, Kunth „ 319
sarmentosa, Dalz. & Gibs. „ 317
Asparagus, *Linn.* vi. 314
acerosus, *Roxb.* „ 317
acerosus, Wall. „ 316
adscendens, *Roxb.* „ 317
aethiopicus, Linn. „ 318
asiaticus, *Linn.* „ 316
asiaticus, Wight „ 316
capitatus, *Baker* „ 315
Curillus, *Ham.* „ 318
Curillus, Wall. vi. 315, 316, 318
dubius, Dcne. vi. 316
dumosus, *Baker* „ 315
falcatus, *Linn.* „ 318
fasciculatus, Br. vi. 316, 317
filicinus, *Ham.* vi. 314
floribundus, Rottl. „ 315
gonoclados, *Baker* „ 318
gracilis, *Royle* „ 315
Jacquemontii, *Baker* „ 316
lævissimus, *Steud.* „ 317
lycopodineus, Wall. „ 315
nepalensis, *Baker* „ 316
racemosus, *Willd.* „ 316
Rottleri, *Baker* „ 315
rubricaulis, *Baker* „ 318
sarmentosus, Heyne „ 316
sarmentosus, Linn. „ 319
? *sarmentosus*, Thw. „ 318
subulatus, *Steud.* „ 315
volubilis, Ham. „ 316
volubilis, Wall. vi. 317, 318
zeylanicus, *Hk. f.* vi. 317
ASPHODELEÆ vi. 300
Asphodelopsis arangadinensis, Steud. vi. 335
Asphodelus, *Linn.* vi. 332
æstivus, Rchb. „ 332
clavatus, Roxb. „ 332
comosus, *Baker* „ 332
fistulosus, Linn. „ 332
microcarpus, Rchb. „ 332

Asphodelus Vol. Page
parviflorus, Wight vi. 332
persicus, J. & S. „ 333
tenuifolius, *Cav.* „ 332
Aspidistra, *Ker* vi. 326
longifolia, *Hk. f.* „ 326
lurida, Baker „ 326
lurida, Ker „ 326
ASPIDISTREÆ vi. 300
Asperella, *Humb.* vii. 375
Duthiei, *Stapf* „ 375
Hystrix, Willd. „ 375
sibirica, Trautv. „ 375
Asperugo, *Linn.* iv. 166
procumbens, *Linn.* „ 167
Asperula, *Linn.* iii. 209
brachyantha, *Boiss.* „ 209
consanguinea, Klotz. „ 205
cynanchica, *Linn.* „ 209
galioides, Jacq. „ 205
Hoffmeisteri, Klotz. „ 205
odorata, Linn. „ 205
Asphota, Jones iii. 591
Aspidocarya, *Hk. f. & T.* i. 95
uvifera, *Hk. f. & T.* „ 95
Aspidopterys, *Juss.* i. 419
canarensis, *Dalz.* i. 420, 697
concava, *Juss.* „ 420, 422
cordata, *Juss.* i. 421
glabriuscula, Juss. „ 420
glomerata, Wight „ 420
hirsuta, *Juss.* „ 421
lanuginosa, Juss. „ 421
nutans, *Hk. f.* „ 421
nutans, Juss. „ 421
oxyphylla, Juss. „ 420
rotundifolia, Juss. „ 421
Roxburghiana, *Juss.* „ 420
Roxburghiana, Juss. „ 421
tomentosa, Juss. „ 422
Wallichii, *Hk. f.* „ 421
sp. Helfer. „ 422
Asprella oryzoides, Lamk. vii. 94
Aster, *Linn.* iii. 249
albescens, Wall. „ 257
alpinus, Thoms. „ 250
altaicus, *Willd.* „ 251
Amellus, Linn. iii. 249, 250
angustifolius, Lindl. iii. 251
asperrimus, Wall. „ 252
asperulus, *Nees* „ 252
aureus, D. Don „ 253
bellidioides, Ham. „ 256
Benthami, Steetz „ 252
cabulicus, Lindl. „ 257
diplostephioides, *Benth.* „ 251
elegans, Hk. f. & T. „ 250
ferrugineus, Edgew. „ 257

Aster Vol. Page
Heterochæta, *Benth.* ... iii. 250
himalaicus, *Clarke* ... ... „ 250
hyderabadensis, Wall. ... „ 209
indicus, Heyne ... ... „ 299
indicus, Linn. ... ... „ 249
inuloides, D. Don ... ... „ 256
lævis, Willd. ... ... „ 253
Laka, *Clarke* ... ... „ 253
linifolius, Wall. ... ... „ 343
molliusculus, *Wall.* ... ... „ 251
multiradiatus, Wall. ... „ 256
nitidulus, DC. ... ... „ 253
odontophyllus, Wall. ... „ 343
peduncularis, Wall. ... ... „ 252
Pseudamellus, *Hk. f.* ... „ 249
scabridus, Hk. f. & T. ... „ 252
? *scaposus*, Klatt ... ... „ 251
sikkimensis, *Hk. f. & T.* ... „ 252
spartioides, Clarke ... ... „ 251
Stracheyi, *Hk. f.* ... ... „ 250
Thomsoni, *Clarke* ... ... „ 252
tibeticus, *Hk. f.* ... ... „ 251
tricephalus, *Clarke* ... ... „ 250
trinervius, *Roxb.* ... ... „ 252
Asteracantha auriculata, Nees iv. 409
longifolia, Nees... ... ... „ 409
ASTEROIDEÆ ... ... iii. 221, 244
Asteromæa indica, Bl. ... ... iii. 249
Astilbe, *Ham.* ... ... ii. 389
chinenis, Maxim. ... ... „ 389
japonica, Morr. & Dcne. ... „ 389
rivularis, *Ham.* ... ... „ 389
rubra, *Hk. f. & T.* ... ... „ 389
speciosa, Jungh. ... ... „ 389
Stoliczkai, *Kurz* ... ... „ 389
Thunbergii, Maxim. ... ... „ 389
Astragalus, *Linn.* ... ... ii. 118
acaulis, *Baker* ... ... „ 132
acutiflorus, Benth. ... ... „ 120
adesmiæfolius, *Benth.* ... „ 121
Aitchisoni, *Baker* ... ... „ 121
alpinus, *Linn.* ... ... „ 123
Amherstianus, *Benth.* ... „ 119
ammocryptos, Boiss. ... „ 122
anfractuosus, Bunge ... „ 136
anomalus, *Bunge* ... ... „ 133
arabicus, Ehrhenb. ... ... „ 121
bakuensis, *Bunge* ... ... „ 132
bhotanensis, *Baker* ... ... „ 126
bicuspis, *Fisch.* ... ... „ 135
biflorus, Linn. ... ... „ 66
bracteosus, Klotz. ... ... „ 125
cæruleus, Hort. Par. ... „ 137
Candolleanus, *Royle* ... „ 132
carinalis, Benth. ... ... „ 126
cashmiriensis, *Bunge* ... „ 127
chlorostachys, *Lindl.* ... „ 128

Astragalus Vol. Page
cicerifolius, *Royle* ... ... ii. 134
ciliolatus, *Benth.* ... ... „ 129
coluteocarpus, *Boiss.* ... „ 130
concretus, Benth. ... ... „ 131
confertus, *Benth.* ... ... „ 123
contortuplicatus, *Linn.* ... „ 122
crassicaulis, Grah. ... ... „ 117
Daltonianus, Bunge ... „ 134
densiflorus, *Kar. & Kir.* ... „ 125
distans, Benth. ... ... „ 128
Donianus, *DC.* ... ... „ 119
Emodi, *Steud.* ... ... „ 130
erpocaulos, Boiss. ... ... „ 122
Falconeri, *Bunge* ... ... „ 120
floridus, *Benth.* ... ... „ 127
frigidus, *Bunge* ... ... „ 130
Gerardianus, Grah. ... ... „ 116
glabrifolius, Bunge ... ... „ 136
Govanianus, Grah. ... ... „ 128
gracilipes, *Benth.* ... ... „ 122
Grahamianus, Royle ... „ 134
graveolens, *Ham.* ... ... „ 131
hamosus, *Linn.* ... ... „ 122
Hendersoni, *Baker* ... ... „ 120
Heydei, *Baker* ... ... „ 118
himalayanus, *Klotz.* ... ... „ 126
himalensis, Jacquem. ... „ 128
hippocrepidis, Benth. ... „ 119
hosackioides, *Benth.* ... „ 123
humifusus, Jacquem. ... „ 119
hypoglottoides, *Baker* ... „ 124
inconspicuus, *Baker* ... „ 126
Jacquemontii, Bunge ... „ 134
khasianus, *Benth.* ... ... „ 130
kongrensis, *Benth.* ... ... „ 120
lasiocladus, Benth. ... ... „ 135
leptacanthus, Benth... ... „ 135
leptocentrus, *Bunge* ... „ 135
lessertioides, *Benth.* ... „ 124
leucocephalus, *Grah.* ... „ 128
longicaulis, *Baker* ... ... „ 129
longipes, Kar. & Kir. ... „ 128
macropterus, *DC.* ... ... „ 128
macrorhizus, D. Don ... „ 119
Maddenianus, *Benth.* ... „ 127
malacophyllus, *Benth.* ... „ 133
Maxwellii, Royle ... ... „ 124
medullaris, Boiss. ... ... „ 131
melanostachys, *Benth.* ... „ 125
microphyllus, Jacquem. ... „ 134
minutus, Boiss. ... ... „ 122
mirpourensis, Cambess. ... „ 118
Moorcroftianus, Wall. ... „ 249
multiceps, *Wall.* ... ... „ 134
Munroi, *Benth.* ... ... „ 128
mutabilis, Jacquem. ... ... „ 125
nivalis, *Kar. & Kir.* ... ... „ 136

Astragalus Vol. Page
nubigenus, D. Don ... ... ii. 117
ophiocarpus, *Benth*... ... „ 122
oplites, Benth. ... ... „ 134
oxyodon, *Baker*... ... ... „ 125
peduncularis, *Royle*... ... „ 136
podocarpus, Grah. ... ... „ 130
polycanthus, *Royle*... ... „ 134
polycanthus, Wall. ... ... „ 116
prolixus, *Sieber*... ... ... „ 121
psilocentrus, Fisch. ... ... „ 134
puberulus, Kar. & Kir. ... „ 128
pycnorhizus, *Wall*. ... ... „ 119
pyrrhotrichus, *Boiss*. ... „ 133
rhizanthus, *Royle* ... ... „ 131
rigidulus, *Benth*. ... ... „ 123
rotundifolius, Royle... ... „ 131
Royleanus, Bunge ... ... „ 132
scariosus, Benth. ... ... „ 134
scorpiurus, Bunge ... ... „ 119
Scottianus, Stocks ... ... „ 131
sesbanioides, Benth.... ... „ 121
sikkimensis, *Benth*.... ... „ 126
Stewartii, *Baker* ... ... „ 129
stipulatus, *D. Don* ... ... „ 131
stipulatus, Jacquem. ... „ 131
strictus, *Grah*. ... ... „ 124
strobiliferus, *Royle* ... ... „ 135
subcaulescens, Royle ... „ 133
subulatus, *M. Bieb*.... ... „ 136
subumbellatus, *Klotz*. ... „ 119
tenuicaulis, *Benth*. ... ... „ 126
tenuispinus, Bunge ... ... „ 134
Thomsonianus, Benth. ... „ 136
tibetanus, *Benth*. ... ... „ 124
tribulifolius, *Benth*. ... „ 120
tribuloides, *Delile* ... ... „ 122
trichocarpus, *Grah*. ... „ 121
vesiculosus, Jacquem. ... „ 138
vicioides, *Grah*. ... ... „ 131
vicioides, Ledeb. ... ... „ 128
Webbianus, *Grah*. ... ... „ 132
xiphocarpus, *Benth*. ... „ 129
zanskarensis, *Benth*. ... „ 134
Astranthus fœtida, Wall. ... ii. 598
Astrogyne coriacea, Wall. ... i. 629
Astronia, *Bl*.... ... ... ii. 550
smilacifolia, *Triana* ... ... „ 550
ASTRONIEÆ ... ... ii. 513
Astronium insigne, Marchand ii. 30
Astropetalum sp., Griff... ... ii. 26, 27
Astylus venusta, Wight ... ii. 339
Asystasia, *Bl*. ... ... iv. 492
atroviridis, *T. Anders*. ... „ 495
Blumei, Nees ... ... „ 493
calycina, Nees ... ... „ 469
chelonoides, *Nees* ... ... „ 493
chelonoides, Nees ... ... „ 494

Asystasia Vol. Page
coromandeliana, *Nees* ... iv. 493
coromandeliana, Bot. Mag. „ 494
coromandeliana, Wight ... „ 494
crispata, *Benth*. ... ... „ 494
denticulata, Nees ... ... „ 465
gangetica, T. Anders. ... „ 493
intrusa, *Bl*. ... ... „ 493
? Kunthiana, *Nees* ... ... „ 496
lanceolata, *T. Anders*. ... „ 495
Lawiana, *Dalz*.... ... ... „ 496
macrocarpa, *Nees* ... ... „ 495
mysurensis, T. Anders. ... „ 496
Neesiana, *Nees* ... ... „ 496
nemorum, Nees ... iv. 493, 494
Panichanga, Nees ... ... iv. 473
Parishii, T. Anders... ... „ 499
pauciflora, Nees ... ... „ 501
plumbaginea, Nees ... ... „ 493
thyrsacanthus, T. Anders. „ 497
travancorica, *Bedd*. ... „ 494
violacea, *Dalz*.... ... ... „ 494
violacea, Hk. f. ... ... „ 493
sp., Hk. f. & T. ... iv. 495, 496
Atacca cristata, Kunth ... vi. 287
integrifolia, Presl ... ... „ 288
Atalantia, *Corr*. ... ... i. 511
? *bilocularis*, Wall. ... vii. 508, 514
buxifolia, Oliv. ... ... vii. 508
capitellata, Lindl. ... ... „ 512
carissoides, Wall. ... ... „ 512
caudata, *Hk. f*.... ... ... „ 513
ceylanica, *Oliv*. ... ... „ 512
floribunda, Wight ... ... „ 512
missionis, *Oliv*. ... ... „ 513
monophylla, *Corr*. ... ... „ 511
platystigma, Wight ... ... „ 512
racemosa, *W. & A*. ... ... „ 512
Roxburghii, *Hk. f*. ... ... „ 513
Roxburghii, Oliv. ... ... „ 513
Ataxia Hookeri, Griseb. ... vii. 223
Ate acuminata, Thw. ... ... vi. 133
virens, Lindl. ... ... „ 133
Atelanthera, *Hk. f. & T*. ... i. 133
perpusilla, *Hk. f. & T*. ... „ 133
Athamantha *achilleifolia*, Wall. ... ... ii. 684
Ajowan, Wall. ... ... „ 682
anethifolia, Wall. ... ... „ 683
depressa, D. Don ... ... „ 701
diffusa, Wall. ... ... „ 693
gigantea, *D. Don* ... ... „ 720
Roxburghiana, Wall... ... „ 682
teres, *D. Don* ... ... „ 720
Athanasia indica, Roxb. ... iii. 377
Atherandra, *Dcne*. ... ... iv. 9
acutifolia, *Dcne*. ... ... „ 9
cuspidata, Bl. ... ... „ 9

Atherandra Vol. Page
pubescens, Bl. iv. 9
Wallichii, Benth. „ 8
Atherolepis, *Hk. f.* iv. 8
Wallichii, *Hk. f.* iv. 8, 733
Atherostemon, *Bl.* iv. 8
javensis, *Bl.* „ 8
Athroisma, *DC.* iii. 276
laciniatum, *DC.* „ 276
Athroisma, Griff. v. 396
dentatum, Griff. „ 396
serratum, Griff. „ 396
Atragene zeylanica, Linn. i. 7
Atraphacis sp., Aitch. v. 23
Atrategia, Bedd. i. 74
Thomsoni, Bedd. „ 75
Atriplex, *Linn.* v. 6
Belangeri, Boiss. „ 7
bengalensis, Lamk. „ 6
crassifolia, *C. A. Mey.* „ 6
cristata, Koen. „ 7
Griffithii, Moq. „ 8
heterantha, Wight „ 6
hortensis, *Linn.* „ 6
Koenigii, Wall. „ 7
laciniata, Aitch. „ 7
laciniata, Linn. „ 7
Lindleyi, Moq. „ 8
repens, *Roth* „ 7
repens, Aitch. „ 7
rosea, *Linn.* „ 7
Stocksii, *Boiss.* „ 7
tartarica, Linn. „ 7
virgata, Roth „ 6
ATRIPLICEÆ v. 1
Atropa, *Linn.* iv. 241
acuminata, Royle „ 241
Belladonna, *Linn.* „ 241
lutescens, Jacq. „ 241
physaloides, Linn. „ 240
ATROPEÆ iv. 228
Atropis distans, Griseb. vii. 347
tenuiflora, Griseb. „ 347
Atylosia, *W. & A.* ii. 212
albicans, *Benth.* „ 215
barbata, *Baker* „ 216
candicans, Kurz „ 222
Candollei, *W. & A.* „ 212
circinalis, Benth. „ 219
elongata, *Benth.* „ 215
geminiflora, *Dalz.* „ 212
glandulosa, Dalz. „ 213
goensis, Dalz. „ 216
grandiflora, *Benth.* „ 214
kulnensis, *Dalz.* „ 214
Lawii, Wight „ 213
lineata, *W. & A.* „ 213
major, W. & A. „ 212

Atylosia Vol. Page
mollis, *Benth.* ii. 213
nivea, *Benth.* „ 214
platycarpa, *Benth.* „ 216
punctata, Dalz. „ 218
rostrata, *Baker* „ 216
rugosa, *W. & A.* „ 215
scarabæoides, *Benth.* „ 215
sericea, *Benth.* „ 213
subrhombea, Miq. „ 218
villosa, *Benth.* „ 214
Aubletia caseolaris, Gærtn. ii. 580
Aucklandia Costus, Falc. iii. 376
Aucuba, *Thunb.* ii. 747
himalaica, *Hk. f.* „ 747
japonica, Thunb. „ 747
longifolia, Hk. „ 747
Aulacodiscus, *Hk. f.* iii. 97
premnoides, *Hk. f.* „ 97
Aulacospermum simplex, Ost. & Rupr. ii. 705
Aurantiacea, Wall. i. 501, 502
AURANTIEÆ i. 484
Avena, *Linn.* vii. 274
aenea, *Hk. f.* „ 279
airoides, Koel. „ 278
alpina, Sm. „ 276
argæa, Boiss. „ 276
aspera, *Munro* „ 277
aspera, Griseb. „ 277
athenanthera, Presl „ 276
barbata, *Brot.* „ 275
benghalensis, Schwaegr. „ 280
Besseri, Gmel. „ 277
bromoides, Mert. & Koch „ 276
byzantina, C. Koch „ 275
caryophyllea, Weber , 272
Cavanillesii, *Koch* „ 276
Clarkei, *Hk. f.* „ 278
fatua, *Linn.* „ 275
flaccida, *Hack.* „ 280
flavescens, *Linn.* „ 279
hirsuta, Roth „ 276
hirtula, Lag. „ 276
laeta, Salisb. „ 363
Loefflingiana, Cav. „ 276
malabarica, Heyne „ 69
micans, *Hk. f.* „ 279
mollis, Mich. „ 278
mysorensis, Spreng. „ 287
oligostachya, Munro „ 283
orientalis, Schreb. „ 275
phleoides, Urv. „ 278
pilosa, Bieb. vii. 275, 280
polyneura, *Hk. f.* vii. 277
pratensis, *Linn.* „ 276
pubescens, Royle „ 277
sativa, *Linn.* „ 275

Avena Vol. Page
secunda, Jacq. ... vii. 276
sempervirens, Bess. ... „ 277
sibirica, Linn. ... „ 231
sikkimensis, *Hk. f.* ... „ 280
sterilis, Del. ... „ 275
sterilis, Royle ... „ 275
subspicata, *Clairv.* ... „ 278
toluccensis, H. B. K. ... „ 278
valesiaca, Nym. ... „ 276
virescens, Regel ... „ 279
sp., Wall. ... „ 277
AVENEÆ ... vii. 6, 269
Averrhoa, *Linn.* ... i. 439
Bilimbi, *Linn.* ... „ 439
Carambola, *Linn.* ... „ 439
Avicennia, *Linn.* ... iv. 604
alba, Bl. ... „ 604
intermedia, Griff. ... „ 604
officinalis, *Linn.* ... „ 604
officinalis, Kurz ... „ 604
resinifera, Forsk. ... „ 604
resinifera, Griff. ... „ 604
tomentosa, Jacq. ... „ 604
AVICENNIEÆ ... iv. 561
Axanthes arborea, Bl. ... iii. 98
Blumeana, Wight ... „ 99
ceylanica, Wight ... „ 98
elliptica, Wight ... „ 97
enneandra, Wight ... „ 97
Griffithiana, Wight ... „ 98
hirsuta, Wight ... „ 98
longifolia, Wight ... „ 99
strigosa, Bl. ... „ 99
? *Axenfeldia intermedia*, Baill. ... v. 436
Axinandra, *Thwaites* ... ii. 581
Beccariana, Baill. ... „ 581
Maingayi, *Clarke* ... „ 581
zeylanica, *Thw.* ... „ 581
Axonopus, *Beauv.* ... vii. 63
cimicinus, *Beauv.* ... „ 64
corymbosus, Schult. ... „ 14
semi-alatus, *Hk. f.* ... „ 64
Axonotechium trianthemoides, Fenzl ... ii. 661
Axyris, *Linn.* ... v. 8
amaranthoides, *Linn.* ... „ 8
ceratoides, Linn. ... „ 8
hybrida, Linn. ... „ 8
prostrata, Linn. ... „ 9
Azadirachta indica, Juss. ... i. 544
Azalea fragrans, Adams ... iii. 472
lapponica, Pall. ... „ 472
sp., Griff. ... „ 474
Azanza acuminata, Alef. ... i. 345
Lampas, Alef. ... „ 345
Azima, *Lamk.* ... iii. 620

Azima Vol. Page
sarmentosa, *Benth.* ... iii. 620
tetracantha, *Lamk.* ... „ 620

Babactes oblongifolia, DC. ... iv. 359
Baccaurea, *Lour.* ... v. 367
acuminata, Muell. ... „ 376
affinis, Muell. ... „ 369
bracteata, *Muell.* ... „ 372
brevipes, *Hk. f.* ... „ 372
costulata, Muell. ... „ 373
courtallensis, *Muell.* ... „ 367
dulcis, Jacq. ... „ 373
flaccida, *Muell.* ... „ 370
Griffithii, *Hk. f.* ... „ 371
javanica, Muell. ... „ 376
lanceolata, *Muell.* ... „ 368
latifolia, *King* ... „ 373
macrocarpa, *Muell.* ... „ 375
macrophylla, *Muell.* ... „ 369
macrostachya, Wight ... „ 371
Maingayi, *Hk. f.* ... „ 370
malayana, *King* ... „ 374
minor, *Hk. f.* ... „ 370
Motleyana, *Muell.* ... „ 371
parviflora, *Muell.* ... „ 368
polyneura, *Hk. f.* ... „ 369
propinqua, Muell. ... „ 371
pubera, Muell. ... „ 373
reticulata, *Hk. f.* ... „ 373
sapida, *Muell.* ... „ 371
sapida, Bedd. ... „ 368
Scortechinii, *Hk. f.* ... „ 368
? **symplocoides**, *Hk. f.* ... „ 376
Wallichii, *Hk. f.* ... „ 375
Wrayi, *King* ... „ 374
sp., A. B. ... „ 373
sp., C. D. ... „ 374
sp., E. F. ... „ 375
sp., G. H. ... „ 376
Baccharis indica, Linn. ... iii. 272
nitida, Wall. ... „ 268
ovalis, Pers. ... „ 272
trifurcata, Trev. ... „ 259
Badamia Commersoni, Gærtn. ii. 444
Bæckea, *Linn.* ... ii. 463
chinensis, Gærtn. ... „ 463
Cumingeana, Schau. ... „ 463
frutescens, *Linn.* ... „ 463
Bæobotrys acuminata, Spreng iii. 508
acuminata, Wall. i. 619, iii. 508
argentea, Wall. ... iii. 510
dubia, Wall. ... „ 510
fragrans, Wall. ... „ 508
glabra, Roxb. ... „ 508
indica, Roxb. ... „ 509
indica, Wall. ... „ 509
macrophylla, Wall. ... „ 510

Bæobotroys Vol. Page
  ? missionis, Wall. ... ... iii. 508
  mollis, Bl. ... ... „ 510
  nemoralis, Roxb. ... ... „ 509
  ovata, Wall. ... ... „ 508
  paniculata, Wall. ... ... „ 509
  ramentacea, Roxb. ... ... „ 508
Baissea, *A. DC.* ... ... iii. 662
  acuminata, *Benth.* ... ... „ 663
  malaccensis, *Hk. f.* ... ... „ 663
Balanites, *Del.* ... ... i. 522
  ægyptiaca, Wall. ... ... „ 522
  Roxburghii, *Planch.* iii. 522, 574
Balanophora, *Forst.* ... ... v. 237
  affinis, Griff. ... ... „ 237
  alveolata, Griff. ... ... „ 237
  Burmanniana, Griff. ... „ 237
  dioica, *Br.* ... ... „ 237
  elongata, Hk. f.... ... ... „ 238
  elongata, Schott. & Endl. „ 237
  gigantea, Wall. ... ... „ 238
  indica, *Wall.* ... ... v. 237, 862
  indica, Thw. ... ... v. 238
  involucrata, *Hk. f.* ... ... „ 237
  picta, Griff. ... ... „ 237
  picta, Miq.... ... ... „ 238
  polyandra, *Griff.* ... ... „ 238
  Thwaitesii, *Eichler*.... v. 238, 862
  typhina, Wall. ... ... v. 238
BALANOPHOREÆ ... ... v. 236
Balanopteris minor, Gærtn.... i. 363
  Tothila, Gærtn... ... ... „ 363
Balanostreblus, *Kurz*... ... v. 544
  ilicifolia, *Kurz* ... ... „ 544
Balansæa Fontanesii, Boiss. & Reut.... ... ... ii. 691
Baldingera arundinacea, Dumort .. .. vii. 221
  colorata, Gærtn.... ... ... „ 221
Baliospermum, *Bl.* ... ... v. 461
  angulare, Dcne. ... ... „ 461
  axillare, *Bl.* ... ... „ 461
  calycinum, *Muell.* ... ... „ 462
  corymbiferum, *Hk. f.* ... „ 463
  indicum, Dcne.... ... ... „ 461
  malayanum, *Hk. f.* ... ... „ 463
  micranthum, *Muell.*... ... „ 462
  montanum, Muell. ... ... „ 462
  Moritzianum, Baill.... ... „ 461
  polyandrum, Wight ... ... „ 461
  reidioides, Kurz ... ... „ 461
  sinuatum, *Muell.* ... ... „ 462
  sp., Griff. ... ... „ 463
Ballota cinerea, D. Don ... iv. 679
  disticha, Linn. ... ... „ 672
  limbata, Benth.... ... ... „ 680
  mauritiana, Pers. ... ... „ 672
Balsamiflora deltoides, Griff. v. 638

Vol. Page
Balsamina chinensis, DC. ... i. 444
  coccinea, DC. ... ... „ 454
  cornuta, DC. ... ... „ 454
  fasciculata, DC.... ... ... „ 444
  hortensis, DC. ... ... „ 454
  latifolia, DC. ... ... „ 450
  Leschenaultii, DC. ... ... „ 451
  minor, DC. ... ... „ 446
  mysorensis, DC.... ... ... „ 456
  oppositifolia, DC. ... ... „ 448
  rosmarinifolia, DC. ... ... „ 448
BALSAMINEÆ ... ... i. 427
Balsamodendron, *Kunth.* ... i. 529
  Berryi, *Arn.* ... ... „ 529
  gileadense, DC.... ... ... „ 530
  Mukul, *Hook.* ... ... „ 529
  pubescens, *Stocks* ... ... „ 529
  Roxburghii, *Arn.* .. ... „ 529
  Roxburghii, Stocks ... ... „ 529
  ? Wightii, Arn.... ... ... „ 529
  ? zeylanicum, Kunth. ... i. 532
Bambos stricta, Roxb.... ... vii. 404
Bambusa, *Schreb.*... ... ... vii. 386
  affinis, *Munro* ... ... „ 390
  Amahussana, Lindl.... ... „ 393
  andropogonifolia, Griff. ... „ 412
  aristata, Lodd.... ... ... „ 397
  arundinacea, *Willd.* ... „ 395
  arundinacea, Ait. ... ... „ 392
  Arundo, Klein ... ... „ 395
  atra, Lindl. ... ... „ 393
  attenuata, Thw. ... ... „ 411
  auriculata, *Kurz* ... ... „ 396
  baccifera, Roxb. ... ... „ 417
  Balcooa, *Roxb.* ... ... „ 391
  bifolia, Sieb. ... ... „ 386
  Binghami, *Gamble* ... ... „ 392
  ? Bitung, Hassk. ... ... „ 401
  Bitung, Schult.... ... ... „ 408
  Blumeana, *Schult. f.* ... „ 394
  Brandisii, Munro ... ... „ 408
  burmanica, *Gamble*... ... „ 388
  caesia, Sieb. & Zucc. ... „ 390
  calostachya, Kurz ... ... „ 407
  capensis, Rupr.... ... ... „ 391
  capitata, Wall.... ... ... „ 412
  crinita, Thoms.... ... ... „ 387
  critica, Kurz ... ... „ 389
  cyanostachya, Kurz ... ... „ 389
  elegantissima, Hassk. ... „ 416
  Falconeri, Munro ... vii. 387, 405
  flagellifera, Griff. ... ... vii. 408
  flexuosa, Munro ... ... „ 392
  floribunda, Munro ... ... „ 383
  gigantea, Wall. ... ... „ 406
  glauca, Lodd. ... ... „ 390
  glaucescens, Sieb. ... ... „ 391

Bambusa Vol. Page
globifera, Griseb. ... vii. 405
gracilis, Wall. ... „ 401
Griffithiana, *Munro* ... „ 394
Helferi, Munro ... „ 411
hetirostachya, Munro ... „ 400
humilis, Rchb. ... „ 392
khasiana, *Munro* ... „ 390
Kingiana, *Gamble* ... „ 393
latiflora, Kurz ... „ 407
lineata, *Munro* ... „ 393
longispatha, Kurz ... „ 407
Macala, Ham. ... „ 387
macro, Wall. ... „ 382
marginata, *Munro* ... „ 396
Mastersii, *Munro* ... „ 396
maxima, Ham. ... „ 405
M'Clellandi, Munro ... „ 415
microphylla, Griff. ... „ 384
monogyna, Griff. ... „ 405
nana, *Roxb.* ... „ 390
Neesiana, Arn. ... „ 395
nigrociliata, Büse ... „ 401
nutans, *Wall.* ... „ 387
Oliveriana, *Gamble* ... „ 392
orientalis, Nees ... „ 395
pallida, *Munro* ... „ 389
patellaris, Kurz ... „ 406
picta, Lindl. ... „ 393
polymorpha, *Munro* ... „ 389
prava, Lindl. ... „ 393
pseudarundinacea, Steud. „ 398
pubescens, Lodd. ... „ 404
pungens, Blanco ... „ 395
regia, Thoms. ... „ 397
reticulata, Rupr. ... „ 386
Ridleyi, *Gamble* ... „ 388
Ritcheyi, Munro ... „ 402
Rumphiana, Kurz ... „ 393
scandens, Bl. ... „ 414
schizostachyoides, *Kurz* „ 393
scriptoria, Dennst. ... „ 418
siamensis, Kurz ... „ 397
Sieberi, Griseb. ... „ 392
spinosa, Bl. ... „ 395
spinosa, Roxb. ... „ 395
sterilis, Kurz ... „ 391
striata, Lodd. ... „ 392
stricta, Roxb. ... „ 404
stridula, Moon ... „ 419
surinamensis, Rupr. ... „ 392
Tanœa, Ham. ... „ 404
teres, *Ham.* ... „ 388
Thouarsii, Kunth ... „ 392
trigyna, Roxb. ... „ 387
Tulda, *Roxb.* ... „ 387
Vasaria, Ham. ... „ 391
verticillata, Benth. ... „ 407

Bambusa Vol. Page
verticillata, Rottl. ... vii. 404
verticillata, Willd. ... „ 398
villosula, *Kurz* ... „ 396
viridi-glaucescens, Carr. ... „ 391
vulgaris, *Schrad.* ... „ 391
Wightii, Munro ... „ 420
Wrayi, *Stapf* ... „ 394
sp., Griff. ... „ 394
sp., Wall. ... vii. 387, 404, 416
BAMBUSEÆ ... vii. 9, 375
Bambusifolia, Hk. f. ... v. 786
Bambusoides, Wall. ... vii. 383
Bamia angulosa, Wall. ... i. 341
cancellata, Wall. ... „ 342
fusiformis, Wall. ... „ 342
magnifica, Wall. ... „ 342
pungens, Wall. ... „ 341
rugosa, Wall. ... „ 342
tetraphylla, Wall. ... „ 341
sp., Wall. ... „ 342
Banalia, *Moq.* ... iv. 716
thyrsiflora, *Moq.* ... „ 716
Bandura zeylanica, Burm. ... v. 68
Banglium sulphureum, Ham. ... vi. 217
Banisteria bengalensis, Linn. i. 418
tetraptera, Sonn. ... „ 418
unicapsularis, Lamk. ... „ 418
Banksia speciosa, Koen. ... vi. 250
Baptisia ? nepalensis, Hook ... ii. 62
Barbarea, *Br.* ... i. 134
arcuata, Rchb. ... „ 134
elata, *Hk. f. & T.* ... „ 135
iberica, DC. ... „ 134
intermedia, Bureau ... „ 134
præcox, Fries ... „ 134
vulgaris, *Br.* ... „ 134
Barclaya, *Wall.* ... i. 115
longifolia, *Wall.* ... „ 115
Barkania punctata, Ehrb. ... v. 663
Barkhausia flexuosa, DC. ... iii. 394
fœtida, DC. ... „ 393
porrifolia, DC. ... „ 398
Roylei, DC. ... iii. 396, 398
tenuifolia, DC. ... iii. 395
Barleria, *Linn.* ... iv. 482
acanthoides, *Vahl* ... „ 484
acuminata, Wight ... „ 485
Arnottiana, *Nees* ... „ 486
Beddomei, T. Anders. ... „ 486
bispinosa, Nees ... „ 484
bracteata, Heyne ... „ 490
buxifolia, *Linn.* ... „ 483
buxifolia, Wall. ... „ 484
ciliata, Roxb. ... „ 488
cœrulea, Roxb. ... „ 489
cœrulea, Wall. ... iv. 486, 490

Barleria Vol. Page
conspicua, *Nees* ... iv. 489
courtallica, *Nees* ... „ 489
cristata, *Linn.* ... „ 488
cristata, Lamk. ... „ 484
cuspidata, *Heyne* ... „ 483
dichotoma, Roxb. ... „ 488
diffusa, Wight ... „ 518
elata, Dalz. ... „ 486
Gibsoni, *Dalz.* ... „ 487
grandiflora, *Dalz.* ... „ 488
hexacantha, Moris. ... „ 409
hirsuta, Wall. ... „ 490
Hochstetteri, *Nees* ... „ 483
Hystrix, Linn. ... „ 482
inæqualis, Benth. ... „ 489
involucrata, *Nees* ... „ 485
laciniata, Wall. ... „ 488
Lawii, *T. Anders.* ... „ 486
longiflora, *Linn. f.* ... „ 485
longifolia, Linn. ... „ 409
longifolia, T. Anders. ... „ 485
lupulina, Lindl. ... „ 482
Macraei, Arn. ... „ 485
macrophylla, Heyne ... „ 489
montana, *Nees* ... „ 487
montana, Wight & Nees ... „ 487
mysorensis, *Roth* ... „ 484
napalensis, Nees ... „ 488
nitida, *Nees* ... „ 490
noctiflora, *Linn. f.* ... „ 484
nuda, Nees ... „ 488
nutans, *Nees* ... „ 488
paniculata, Wall. ... „ 485
pentandra, Arn. ... iv. 485, 487
pilosa, *Wall.* ... iv. 486
polystachya, Nees ... „ 490
polytricha, *Wall.* ... „ 490
Prionitis, *Linn.* ... „ 482
pubiflora, Benth. ... „ 482
? *pungens*, Wall. ... „ 517
purpurea, Lodd. ... „ 487
racemosa, Heyne ... „ 485
rotundifolia, Heyne ... „ 484
rubra, Ham. ... „ 482
salicifolia, Heyne ... „ 488
sepalosa, *Clarke* ... „ 487
spicata, Roxb. ... „ 482
Spina-ceylanica, Nees ... „ 484
? *spinosa*, Wall. ... „ 417
Stocksii, *T. Anders* ... „ 489
strigosa, *Willd.* ... „ 489
terminalis, Nees ... „ 490
tomentosa, *Roth* ... „ 485
tomentosa, Wall. ... „ 485
? *trinervis*, Wall. ... „ 517
vestita, *T. Anders.* ... „ 486
sp., Hk. f. & T. ... iv. 486, 487

Vol. Page
Barleriacanthus acanthoides, Oerst. ... iv. 484
noctiflora, Oerst. ... „ 484
Barleriosiphon longiflorus, Oerst. ... iv. 485
Barlerites Hochstetteri, Oerst. iv. 483
Barnardia indica, Wight ... vi. 348
Barringtonia, *Forst.* ... ii. 506
acutangula, *Gærtn.* ... „ 508
alata, Wall. ... „ 508
alba, Miers ... „ 508
alba, Miq. ... „ 507
asiatica, Kurz ... „ 507
augusta, *Kurz* ... „ 509
ceylanica, *Gardn.* ... „ 508
conoidea, *Griff.* ... „ 508
cylindrostachya, Griff. ... „ 509
Helferi, *Clarke* ... „ 509
? *macrophylla*, Miq. ... „ 507
macrostachya, *Kurz* ... „ 509
pterocarpa, *Kurz* ... „ 509
pubescens, Miers ... „ 509
racemosa, *Bl.* ... „ 507
rigida, *Clarke* ... ii. 510, iii. 581
rubra, Miq. ... ii. 507
sarcostachys, Miq. ... „ 509
speciosa, *Forst.* ... „ 507
speciosa, Wall. ... „ 507
BARRINGTONIEÆ ... ii. 506
Barrotia diodon, Gaud. ... vi. 484
Bartsia, *Linn.* ... iv. 305
Odontites, *Huds.* ... „ 305
Basella, *Linn.* ... v. 20
alba, Linn. ... „ 21
canalifolia, Ham. ... „ 21
cordifolia, Lamk. ... „ 21
crassifolia, Wight ... „ 21
japonica, Burm. ... „ 21
lucida, Linn. ... „ 21
nigra, Lour. ... „ 21
ramosa, Jacq. ... „ 21
rubra, *Linn.* ... „ 20
BASELLEÆ ... v. 2
Bassia, *Linn.* ... iii. 543
argentea, *De Vriese* ... „ 545
butyracea, *Roxb.* ... „ 546
caloneura, *Kurz* ... „ 546
canaliculata, Bedd. ... „ 541
cuneata, *Bl.* ... „ 546
elliptica, Dalz. ... „ 542
fulva, *Bedd.* ... „ 545
grandis, Bedd. ... „ 540
? *hypoleuca*, Miq. ... „ 542
lævifolia, Bedd. ... „ 541
lanceolata, Bedd. ... „ 541
latifolia, *Roxb.* ... „ 544
Lobbii, *Clarke* ... „ 546

Bassia Vol. Page
longifolia, *Linn.* ... ... iii. 544
malabarica, *Bedd.* ... ... „ 544
microphylla, *Hook.* ... ... „ 545
Moonii, *Bedd.* ... ... „ 545
Motleyana, *De Vr.* ... iii. 546, 672
Motleyana, Clarke ... ... iii. 672
neriifolia, *Moon* ... ... „ 545
obovata, Forst. ... ... „ 546
pauciflora, Bedd. ... ... „ 541
petiolaris, Bedd... ... ... „ 540
polyantha, Wall. ... ... „ 542
rubiginosa, Bedd. ... ... „ 541
sericea, Bl.... ... ... „ 547
villosa, Wall. ... ... „ 544
Wightiana, Bedd. ... ... „ 539
sp., Miq. ... ... „ 542
Bassovia ? Wallichii, Dunal iv. 232
Batatas, Chois. ... ... iv. 201
acetosæfolia, Chois ... ... „ 213
Choisyana, Wight ... ... „ 190
edulis, Chois. ... ... „ 202
littoralis, Chois. ... ... „ 213
maritima, Bojer ... ... „ 212
paniculata, Chois. ... ... „ 202
pentaphylla, Chois. ... ... „ 202
xanthorhiza, Bojer ... ... „ 202
Baterium validum, Miers ... i. 106
Batis aurantiaca, Wall. ... v. 491
fruticosa, Roxb.... ... v. 538, 539
spinosa, Roxb. ... ... v. 491
Batratherum echinatum, Hk. f. & T. ... ... vii. 144
echinatum, Nees ... ... „ 143
khasianum, Munro ... ... „ 144
lanceolatum, Nees ... ... „ 143
micans, Nees ... ... „ 146
molle, Nees & Arn. ... ... „ 147
nudum, Nees ... ... „ 146
plumbeum, Munro ... ... „ 146
rude, Nees... ... ... „ 144
Schimperi, Nees ... ... „ 147
serrulatum, Hochst.... ... „ 143
submuticum, Nees ... ... „ 145
sp., Wall. ... ... vii. 116, 117, 118, 144, 147, 244
sp., Wight ... ... vii. 145
Batschia laurifolia, Vahl ... ii. 273
Bauhinia, *Linn.* ... ... ii. 275
acida, Reinw. ... ... „ 277
acuminata, *Linn.* ... ... „ 276
anguina, *Roxb.* ... ... „ 284
Benthami, Bedd. ... ... „ 283
bidentata, *Jack* ... ... „ 279
Blancoi, *Baker* ... ... „ 278
brachycarpa, *Wall.* ... ... „ 276
bracteata, *Grah.* ... ... „ 282
Buchanani, Desv. ... ... „ 278

Bauhinia Vol. Page
candida, Ait. ... . ii. 276
candida, Roxb. ... ... „ 284
cordifolia, Roxb. ... ... „ 278
cornifolia, *Baker* ... ... „ 278
coromandeliana, DC. ... „ 284
corymbosa, Roxb. ... ... „ 283
diphylla, *Ham.* ... ... „ 278
divergens, *Baker* ... ... „ 282
elongata, *Korthals* ... ... „ 281
emarginata, *Jack* ... ... „ 278
emarginata, Wall. ... ... „ 279
ferruginea, *Roxb.* ... ... „ 283
Finlaysoniana, *Grah.* ... „ 278
?*foveolata*, Dalz.. ... ... „ 277
glabrifolia, *Baker* ... ... „ 281
glauca, *Wall.* ... ... „ 282
integrifolia, *Roxb.* ... ... „ 279
involucellata, *Kurz* ... ... „ 282
khasiana, *Baker* ... ... „ 281
Lawii, *Benth.* ... ... „ 277
lucida, Wall. ... ... ii. 278, 285
macrostachya, *Wall.* ... ii. 281
malabarica, *Roxb.* ... ... „ 277
mollissima, Wall. ... ... „ 281
monandra, *Kurz* ... ... „ 285
nervosa, *Wall.* ... ... „ 283
ornata, *Kurz* ... ... „ 281
parviflora, Vahl... ... ... „ 276
parvifolia, Teysm. & Binn. „ 283
phœnicea, *Heyne* ... ... „ 283
piperifolia, *Roxb.* ... ... „ 285
polycarpa, *Wall.* ... ... „ 276
Pottsii, G. Don ... ... „ 283
purpurea, *Linn.* ... ... „ 284
purpurea, DC. ... ... „ 277
purpurea, Wall. ... ii. 276, 284
racemosa, *Lam.*... ... ... ii. 276
racemosa, Vahl... ... ... „ 279
reniformis, Royle ... ... „ 277
retusa, *Ham.* ... ... „ 279
rosea, *Kurz* ... ... „ 280
rufa, *Grah.* ... ... „ 280
rufescens, Lam. ... ... „ 277
ruficarpa, Desv. ... ... „ 283
scandens, Linn.... ... ... „ 284
scandens, Roxb. ... ... „ 282
semibifida, *Roxb.* ... ... „ 280
speciosa, Roxb. ... ... „ 275
spicata, Kœn. ... ... „ 276
timorana, Dcne. ... ... „ 276
tomentosa, *Linn.* ... ... „ 275
tomentosa, Wall.. ... ... „ 277
triandra, Roxb. ... ... „ 284
unguiculata, *Baker* ... ... „ 277
Vahlii, *W. & A.* ... ... „ 279
variegata, *Linn.* ... ... „ 284
velutina, *Wall.* ... ... „ 280

Vol. Page
BAUHINIEÆ ... ii. 61
Baumea, Gaud. ... vi. 674
Brownei, Boeck. ... „ 675
crassa, Thw. ... „ 675
riparia, Boeck. ... „ 674
rubiginosa, Boeck. ... „ 675
Beaumontia, *Wall.* ... iii. 660
grandiflora, *Wall.* ... „ 660
Jerdoniana, *Wight* ... „ 661
khasiana, *Hk. f.* ... „ 661
? *longiflora*, Lodd. ... „ 660
multiflora, Teysm. & Binn. „ 661
Beddomea, *Hk. f.* ... i. 566
indica, *Hk. f.* ... „ 566
simplicifolia, *Bedd.* ... „ 566
Beesha baccifera, Schult. ... vii. 417
elegantissima, Kurz ... „ 416
Rheedii, Kunth ... vii. 417, 418
stridula, Munro ... vii. 419
travancorica, Bedd. ... „ 419
Begonia, *Linn.* ... ii. 635
alæcida, *Clarke* ... „ 637
albo-coccinea, *Hook.* ... „ 654
amœna, *Wall.* ... „ 642
andamensis, *Parish* ... „ 650
Arnottiana, A. DC. ... „ 641
barbata, *Wall.* ... „ 646
barbata, Wall. ... „ 645
Bowringiana, Champ. ... „ 645
Brandisiana, *Kurz* ... „ 654
brevicaulis, *A. DC.* ... „ 647
canarana, *Miq.* ... „ 652
Cathcartii, *Hk. f.* ... „ 646
concanensis, *A. DC.* ... „ 653
cordifolia, *Thw.* ... „ 641
crenata, *Dryand.* ... „ 651
delicatula, *Parish* ... „ 652
dipetala, Grah. ... „ 655
Dux, *Clarke* ... „ 637
echinata, Royle... ... „ 638
elongata, Wall. ... „ 650
episcopalis, *Clarke* ... „ 644
erosa, Wall. ... ii. 638, 642
Evansiana, *Andr.* ... ii. 638
fallax, *A. DC.* (see Errata) „ 643
fibrosa, *Clarke* ... „ 652
? *Finlaysoniana*, Wall. ... „ 649
flaccidissima, *Kurz* ... „ 651
floccifera, *Bedd.* ... „ 654
gemmipara, *Hk. f.* ... „ 641
gigantea, *Wall.* ... „ 643
gigantea, Wall. ... „ 636
goniotis, *Clarke* ... „ 648
Grahamiana, Wight... ... „ 654
Griffithii, *Hook.* ... „ 647
guttata, *Wall.* ... „ 648
guttata, Wall. ... „ 650

Begonia Vol. Page
hydrophila, Miq. ... ii. 655
inflata, *Clarke* ... „ 636
integrifolia, *Dalz.* ... „ 648
Josephi, *A. DC.* ... „ 639
khasiana, *Clarke* ... „ 656
laciniata, *Roxb.* ... „ 645
Lobbiana, A. DC. ... „ 640
malabarica, *Lamk.* (see Errata) ... „ 655
malabarica, Roxb. ... „ 635
malabarica, Wall. ... „ 646
martabanica, *A. DC.* ... „ 651
megaptera, *A. DC.* ... „ 646
minima, Bedd. ... „ 651
modestiflora, *Kurz* ... „ 640
moulmeinensis, *Clarke* ... „ 643
nemophila, Kurz ... „ 646
nivea, *Parish* ... „ 654
obliqua, Thunb. ... „ 638
ovatifolia, *A. DC.* ... „ 642
paleacea, *Kurz* ... „ 650
? *palmata*, D. Don. ... „ 645
Parishii, *Clarke* ... „ 651
parviflora, Wall. ... „ 640
parvuliflora, *A. DC.* ... „ 640
pedunculosa, *Wall.* ... „ 639
pedunculosa, Wall. ... „ 656
picta, *Sm.* ... „ 638
procridifolia, *Wall.* ... „ 648
prolifera, *A. DC.* ... „ 649
Rex, *Putzeys* ... „ 647
Roxburghii, *A. DC.* ... „ 635
rubella, Miq. ... „ 652
rubella, Wall. ... „ 642
rubro-venia, *Hook.* ... „ 645
sandalifolia, *Clarke* ... „ 649
Satrapis, *Clarke* ... „ 638
scutata, *Wall.* ... „ 642
scutata, Wall. ... „ 639
sikkimensis, *A. DC.* ... „ 646
silhetensis, *Clarke* ... „ 636
sinensis, A. DC. ... „ 638
sinuata, *Wall.* ... „ 650
subovata, Wall. ... „ 642
subpeltata, *Wight* ... „ 653
subperfoliata, *Par.* ... „ 643
subrotunda, Wall. ... „ 650
surculigera, *Kurz* ... „ 640
tenella, D. Don ... „ 642
tenera, *Dryand.* ... „ 652
tenuifolia, Dryand. ... „ 656
tessaricarpa, *Clarke* ... „ 636
Thomsonii, *A. DC* ... „ 647
Thwaitesii, Hook. ... „ 652
trichocarpa, *Dalz.* ... „ 653
tricuspidata, *Clarke* ... „ 637
triradiata, *Clarke* ... „ 637

Begonia Vol. Page
tuberosa, Hb. Madr. ... ... ii. 655
velutina, Parish ... ... ,, 640
verticillata, *Hook.* ... ... ,, 649
Wallichiana, *A. DC.* ... ... ,, 655
Wightiana, Wall. ... ... ,, 654
xanthina, *Hook.* ... ... ,, 644
sp., Wall ... ... ,, 636
BEGONIACEÆ ... ... iv. 635
Beilschmiedia, *Nees* ... ... v. 121
assamica, *Meissn.* ... ... ,, 124
Brandisii, *Hk. f.* ... ... ,, 123
Clarkei, *Hk. f.* ... ... ,, 122
fagifolia, *Nees* ... ... ,, 122
fagifolia, Bedd. ... ... ,, 122
Gammieana, *King* ... ... ,, 124
globularia, *Kurz* ... ... ,, 125
? longipes, *Hk. f.* ... ... ,, 123
macrophylla, *Meissn.* ... ,, 123
Maingayi, *Hk. f.* ... ... ,, 123
malaccensis, *Hk. f.* ... ... ,, 123
oppositifolia, *Benth.* ... ,, 124
Roxburghiana, *Nees* ... ... ,, 121
Roxburghiana, Dalz. & Gibs. ... ... ,, 122
sikkimensis, *King* ... ... ,, 122
Wightii, *Benth.* ... ... ,, 124
Belamcanda, *Adans.* ... ... vi. 276
chinensis, *Leman* ... ... ,, 277
punctata, Moench ... ... ,, 277
Belenia præalta, Done. ... ... iv. 244
Beleropone ? fulgida, Hassk. iv. 524
Belostemma hirsutum, Wall. iv. 43
Belosynapsis kewensis, Hassk. vi. 388
Benincasa, *Savi* ... ... ii. 616
cerifera, *Savi* ... ... ,, 616
Benjaminea glabra, Benj. ... iv. 272
Bennettia affinis, Muell. ... v. 379
Finlaysoniana, Br. ... ... ,, 380
Jackiana, Br. ... ... ,, 378
pedicellata, Br. ... ... ,, 378
pedicellata, Muell. ... ... ,, 378
phlebocarpa, Muell. ... ... ,, 380
Wallichii, Muell. ... ... ,, 380
sp., Wall. ... ... v. 378, 379, 380
Benthamia, Lindl. ... ... ii. 745
fragifera, Lindl. ... ... ,, 745
Bentinckia, *Berry* ... ... vi. 418
Condapanna, *Berry* ... ... ,, 418
nicobarica, *Becc.* ... ... ,, 418
Benzoin Neesianam, Nees ... v. 186
sericeum, Hk. f. & T. ... ,, 186
BERBEREÆ ... ... i. 107
BERBERIDEÆ ... ... i. 107
Berberis, *Linn.* ... ... i. 108
acanthifolia, Wall. ... ... ,, 109
ætnensis, Presl ... ... ,, 109
affinis, D. Don ... ... ,, 110

Berberis Vol. Page
angulosa, *Wall.* ... ... i. 111
angustifolia, Roxb. ... ... ,, 110
aristata, *DC.* ... ... ,, 110
aristata, DC. ... ... ,, 110
asiatica, *Roxb.* ... ... ,, 110
asiatica, Griff. ... ... ,, 111
atroviridis, Wall. ... ... ,, 111
Bealei, Fort. ... ... ,, 109
brachybotrys, Edgew. ... ,, 109
ceratophylla, D. Don ... ,, 110
Chitria, Ham. ... ... ,, 110
concinna, *Hk. f.* ... ... ,, 111
coriaria, Royle ... ... ,, 110
cratægina, DC. ... ... ,, 109
cretica, Linn. ... ... ,, 109
emarginata, Willd. ... ... ,, 109
floribunda, Wall. ... ... ,, 110
heteropoda, Schrenck ... ,, 109
hypoleuca, Lindl. ... ... ,, 110
insignis, *Hk. f. & T.* ... ... ,, 111
kunawarensis, Royle ... ... ,, 109
Leschenaultiana, Wall. ... ,, 109
Lycium, *Royle* ... ... ,, 110
macrosepala, *Hk. f.* ... ,, 111
Miccia, Ham. ... ... ,, 109
nepalensis, *Spreng.* ... ... ,, 109
petiolaris, Wall. ... ... ,, 110
sphærocarpa, Kar. & Kir. ,, 109
Thunbergii, DC. ... ... ,, 109
tinctoria, Lesch. ... ... ,, 110
turcomanica, Kar. ... ... ,, 109
ulicina, *Hk. f. & T.* ... ... ,, 111
umbellata, *Wall.* ... ... ,, 110
umbellata, Lindl. ... ... ,, 110
vulgaris, *Linn.* ... ... ,, 109
Wallichiana, *DC.* ... ... ,, 110
Wallichiana, DC. ... ... ,, 111
Berchemia, *Neck.* ... ... i. 637
calophylla, G. Don ... ... ,, 636
Edgeworthii, *Laws.* ... ,, 638
flavescens, *Wall.* ... ... ,, 637
floribunda, *Wall.* ... ... ,, 637
? *hamosa*, Wall. ... ... ,, 641
laxa, Wall. ... ... ,, 637
lineata, *DC.* ... ... ,, 638
? *oppositifolia*, Wall. ... ,, 641
? *parviflora*, Wall. ... ... ,, 641
? *Poiretiana*, DC. ... ... ,, 638
polyphylla, *Wall.* ... ... ,, 638
Bergera integerrima, Roxb. i. 501, 502
Kœnigii, Linn. ... ... i. 503
nitida, Thw. ... ... ,, 505
villosa, Wall. ... ... ,, 502
Berghausia ascendens, Munro vii. 243
courtallensis, Nees ... ... ,, 244
elata, Arn. ... ... ,, 242
Emodi, Endl. ... ... ,, 243

Berghausia Vol. Page
mutica, Munro ... vii. 242
pallens, Arn. ... „ 243
scoparia, Munro ... vii. 241, 242
tenella, Arn. ... vii. 243
Bergia, *Linn.* ... i. 251
æstivosa, *W. & A.* ... „ 251
ammannioides, *Roxb.* ... „ 251
aquatica, Roxb. ... „ 252
capensis, Linn. ... „ 252
odorata, *Edgew.* ... „ 251
pentandra, Guill. & Perr. „ 251
suffruticosa, Fenzl ... „ 251
trimera, Fisch. & Mey. ... „ 252
verticillata, *Willd.* ... „ 252
Bernieria nepalensis, DC. ... iii. 391
Berrya, *Roxb.* ... i. 383
Ammonilla, *Roxb.* ... „ 383
mollis, Wall. ... „ 383
Berthelotia lanceolata, DC. ... iii. 272
Bertieria fasciculata, Bl. ... iii. 95
javanica, Bl. ... „ 95
Bessera inermis, Spreng. ... v. 328
Beta, *Linn.* ... v. 5
benghalensis, Roxb. ... „ 5
orientalis, Roth ... „ 5
vulgaris, *Linn.* ... „ 5
Betonica lævigata, D. Don ... iv. 659
Betula, *Tourn.* ... v. 599
acuminata, Wall. ... „ 599
affinis, Endl. ... „ 599
alnoides, *Ham.* ... „ 599
Bhojpattra, Wall. ... „ 599
Castanæ, Ham. ... „ 599
cylindrostachys, Wall. ... „ 599
Jacquemontii, Spach ... „ 599
leptostachya, Wall. ... „ 600
nitida, D. Don ... „ 599
utilis, *D. Don* ... „ 599
Betulaster acuminata, Spach v. 600
affinis, Spach ... „ 600
cylindrostachya, Spach ... „ 599
nitida, Spach ... „ 600
BETULEÆ ... v. 598
Beurreria aspera, G. Don ... iv. 142
glabra, G. Don ... „ 136
lævis, G. Don ... „ 142
punctata, G. Don ... „ 142
retusa, G. Don ... „ 143
Bhesa lapsu *Rhesa* ... i. 622
Moja, Ham. ... „ 622
paniculata, Arn. ... „ 622
Biancæa mimosoides, Todaro ii. 256
Sappan, Todaro ... „ 255
scandens, Todaro ... „ 256
Bidaria elegans, Dalz. & Gibs. iv. 32
elegans, Dcne. ... „ 32
inodora, Dcne. ... „ 33

Bidaria Vol. Page
pergularioides, Thw. ... iv. 32
tingens, Dcne. ... „ 31
Bidens, *Linn.* ... iii. 309
? Bandanna, Wall. ... „ 310
bipinnata, Linn. ... „ 309
bipinnata, Wall. ... „ 309
calva, *Clarke* ... „ 310
cernua, *Linn.* ... „ 309
chinensis, Wall. ... „ 310
chinensis, Willd. ... „ 309
decomposita, Wall. ... „ 310
fervida, Lamk. ... „ 307
fixa, Lamk. ... „ 307
frondosa, Ham. ... „ 309
leucantha, Willd. ... „ 309
pilosa, *Linn.* ... „ 309
pilosa, Linn. ... „ 309
pinnatifida, Heyne ... „ 310
Ramtilla, Wall. ... „ 308
repens, D. Don ... „ 309
rigida, Hort. Calc. ... „ 310
trifida, Roxb. ... „ 309
tripartita, *Linn.* ... „ 309
tripartita, Wall. ... „ 309
Wallichii, DC. ... „ 310
Biebersteinia, *Steph.* ... i. 427
Emodi, *J. & S.* ... „ 427
odora, Royle ... „ 427
Biforis benghalensis, Wall. ... ii. 696
glauca, Wall. ... „ 696
Bigelovia Kleinii, W. & A. ... iii. 200
lævicaulis, Miq. ... „ 200
lasiocarpa, W. & A. ... „ 200
myriantha, Miq. ... „ 200
Roxburghiana, W. & A. ... „ 200
Roxburghiana, Wight Cat. „ 200
setidens, Miq. ... „ 200
stricta, Bl. ... „ 200
Bignonia adenophylla, Wall. iv. 381
amœna, Wall. ... „ 384
atrovirens, Roth ... „ 380
Azedarachta, Koen. ... „ 377
caudata, Miq. ... „ 382
chelonoides, Linn. f. ... „ 382
crispa, Ham. ... „ 379
fimbriata, Wall. ... „ 383
Ghorta, Ham. ... „ 384
glauca, Dcne. ... „ 378
glauca, Wall. ... „ 376
indica, Linn. ... „ 378
laeta, Wall. ... „ 376
longifolia, Willd. ... „ 384
longissima, Lour. ... „ 379
macrostachya, Wall. ... „ 376
multijuga, Wall. ... „ 384
oxyphylla, DC. ... „ 376
Paganelia, Ham. ... „ 384

Bignonia Vol. Page
pentandra, Lour. ... ... iv. 378
Porteriana, Wall. ... ... „ 383
quadrilocularis, Roxb. ... „ 381
spathacea, Linn. f. ... ... „ 379
spathacea, Roxb. ... ... „ 380
stipulata, Roxb. ... ... „ 379
suaveolens, Roxb. ... ... „ 382
suberosa, Roxb. ... ... „ 377
undulata, Sm. ... ... „ 378
xylocarpa, Roxb. ... ... „ 383
BIGNONIACEÆ ... ... iv. 376
Binnendykia trichostylis, Kurz ... ... i. 379
Biophytum, *DC.* ... ... i. 436
adiantoides, *Wight* ... ... „ 437
Apodiscias, *Hk. f.* ... ... „ 437
Candolleanum, Wight ... „ 437
Cumingianum, Hk. f. ... „ 437
intermedium, *Wight* ... „ 438
nervifolium, Thw. ... ... „ 437
nudum, *Arn.* ... ... „ 438
polyphyllum, *Munro* ... „ 439
poterioides, Edgew. ... ... „ 437
proliferum, *Arn.* ... ... „ 438
Reinwardtii, *Walp* ... ... „ 437
sensitivum, *DC.* ... ... „ 436
sesbanioides, Edgew. ... „ 437
verticillatum, Wight ... „ 439
Biota pendula, Endl. ... ... v. 646
Birchea teretifolia, A. Rich. vi. 24
Bischofia, *Bl.* ... ... v. 344
Cumingiana, Dcne. ... „ 345
javanica, *Bl.* ... ... „ 345
oblongifolia, Dcne. ... ... „ 345
Roeperiana, Dcne. ... ... „ 345
Toui, Dcne. ... ... „ 345
trifoliata, Hook. ... ... „ 345
Bistella geminiflora, Delile ii. 399
Bixa, *Linn.* ... ... i. 190
Orellana, *Linn.* ... ... „ 190
BIXEÆ ... ... i. 189
BIXINEÆ ... ... i. 189
Blaberopus lucidus, A. DC. iii. 667
neriifolius, A. DC. ... ... „ 642
Sebusii, Van Huerck & Muell. ... ... „ 642
venenatus, A. DC. ... ... „ 642
Blachia, *Baill.* ... ... v. 402
andamanica, *Hk. f.* ... ... „ 403
calycina, *Benth.* ... ... „ 402
denudata, *Benth.* ... ... „ 403
reflexa, *Benth.* ... ... „ 402
umbellata, *Baill.* ... ... „ 402
Blackburnia monadelpha, Roxb. ... ... iii. 619
oppositifolia, Roxb. ... ... „ 619
Blackwellia acuminata, Wall. ii. 596
Blackwellia Vol. Page
ceylanica(zeylanica), Gardn. ii. 597
dasyantha, Turcz. ... ... „ 597
fœtida, Wall. ... ... „ 597
macrostachya, Turcz. ... „ 596
nepalensis, Wall. ... ... „ 596
propinqua, Wall. ... ... „ 597
spiralis, Wall. ... ... ii. 596, 597
tetrandra, Wight ... ... ii. 597
tomentosa, Vent. ... ... „ 596
zeylanica, Gardn. ... ... „ 597
sp., Griff. ... ... „ 597
Bladhia crispa, Thunb. ... iii. 524
Blainvillea, *Cass.* ... ... iii. 305
alba, Edgew. ... ... „ 305
hispida, Edgew. ... ... „ 305
latifolia, *DC.* ... ... „ 305
rhomboidea, Cass. ... ... „ 305
Blairia nodiflora, Gaertn. iv. 563
Blandovia striata, Lehm. ... v. 67
Blastus, *Lour.* ... ... ii. 528
cochinchinensis, *Lour.* ... „ 528
Bleekeria Zollingeri, Miq. ... v. 421
Blepharis, *Juss.* ... ... iv. 478
asperrima, *Nees* ... ... „ 478
boerhaaviæfolia, *Pers.* ... „ 478
edulis, *Pers.* ... ... „ 479
maderaspatensis, Roth ... „ 479
molluginifolia, *Pers.* ... „ 479
repens, Roth ... ... „ 479
sindica, *Stocks* ... ... „ 479
Blepharispermum, *Wight* ... iii. 276
petiolare, *DC.* ... ... „ 276
subsessile, *DC.* ... ... „ 276
Blepharistemma, *Wall.* ... ii. 441
corymbosum, *Wall.* ... „ 441
Blepharochloa ciliata, Endl. vii. 94
Bletia angustifolia, Gaud. v. 813
bicallosa, D. Don ... ... vi. 196
Dabia, D. Don ... ... „ 4
flava, Wall. ... ... v. 817
graminifolia, D. Don ... „ 857
Masuca, D. Don ... ... „ 851
quadrifida, Ham. ... ... „ 851
Woodfordii, Hook. ... ... „ 817
sp., Griff. ... ... „ 848
Blighia sapida, C. Kon. ... i. 685
Blitanthus nepalensis, Rchb. v. 3
Blitum frutescens, Rumph... iv. 714
virgatum, Linn. ... ... v. 5
Bluffia Eckloniana, Nees ... vii. 64
Blumea, *DC.* ... ... iii. 260, 671
alata, DC. ... ... iii. 271
amplectens, *DC* ... ... „ 260
amplectens, Thw. ... ... „ 261
anagallidifolia, DC. iii. 261, 671
angustifolia, *Thw.* ... ... iii. 264
arenaria, DC. ... ... „ 260

Blumea Vol. Page
aromatica, *DC.* ... ... iii. 270
aurita, DC. ... ... „ 271
balsamifera, *DC.* ... ... „ 270
barbata, *DC.* ... ... „ 262
Belangeriana, *DC.* ... ... „ 266
bifoliata, *DC.* ... ... „ 261
cernua, DC. ... ... „ 263
Chamissoniana, DC. ... ... „ 671
chinensis, *DC.* ... ... „ 268
cichoriifolia, DC. ... ... „ 672
cinerascens, DC. ... ... „ 263
Clarkei, *Hk. f.* ... ... „ 267
crepidifolia, DC. ... ... „ 672
crinita, *Arn.* ... ... „ 267
cuneifolia, DC. ... ... „ 672
densiflora, *DC.* ... ... „ 269
elongata, DC. ... ... iii. 270, 672
eriantha, *DC.* ... ... iii. 266
excisa, DC. ... ... „ 269
fasciculata, DC. ... iii. 262, 672
fistulosa, Kurz ... ... iii. 262
flava, DC. ... ... „ 270
flexuosa, *Clarke* ... ... „ 267
glandulosa, DC. ... ... „ 263
glandulosa, Thw. ... ... „ 265
glomerata, *DC.* ... ... „ 262
gracilis, DC. ... iii. 262, 265, 672
grandis, DC. ... ... iii. 269
guineensis, DC. ... ... „ 271
Hamiltoni, DC. ... ... „ 264
Heyneana, DC. ... ... „ 263
hieracifolia, *DC.* ... ... „ 263
hieracifolia, Hk. f. & T. ... „ 267
hispidula, DC. ... ... „ 672
holosericea, Dalz. & Gibs. „ 262
holosericea, DC. ... iii. 262, 672
Hookeri, *Clarke* ... ... iii. 269
hymenophylla, DC. ... „ 265
hymenophylla, Wight ... „ 265
Jacquemontii, *Hk. f.* ... „ 265
Kingii, *Clarke* ... ... „ 265
lacera, *DC.* ... ... iii. 263, 672
laciniata, *DC.* ... ... iii. 264
laciniata, Ham. ... ... „ 672
lactucæfolia, DC. ... ... „ 672
lapsanoides, DC. ... ... „ 264
leptoclada, Dalz. & Gibs. iii. 262, 263
leptoclada, DC. ... ... „ 262
Leschenaultiana, DC. ... „ 671
? *leucanthema*, DC. ... „ 270
longifolia, DC. ... ... iii. 269, 672
macrostachya, DC. ... ... iii. 263
malabarica, *Hk. f.* ... ... „ 267
Malcolmii, *Hk. f.* ... ... „ 266
membranacea, *DC.* iii. 265, 672
Metziana, Schultz ... ... iii. 266
Milnei, Seem. ... ... „ 269

Blumea Vol. Page
muralis, DC. ... ... iii. 265
Musra, DC. ... ... „ 263
myriocephala, *DC.* ... ... „ 269
myriocephala, Thw. ... ... „ 269
? *napifolia*, DC. ... ... „ 263
neilgherrensis, *Hk. f.* ... „ 261
nodiflora, *Hk. f.* ... ... „ 262
obovata, *DC.* ... ... „ 268
obovata? Clarke ... ... „ 265
oligocephala, DC. ... ... „ 261
oxyodonta, *DC.* ... ... „ 266
parvifolia, DC. ... ... „ 261
paucifolia, DC. ... ... „ 265
phyllostachya, DC. ... ... „ 261
procera, *DC.* ... ... „ 268
pterodonta, DC. ... ... „ 271
pubiflora, DC. ... ... iii. 260, 270
purpurea, DC. ... ... iii. 262
racemosa, DC. ... ... „ 262
riparia, DC. ... ... „ 268
runcinata, DC. ... ... „ 264
runcinata, Wall. ... ... „ 263
semivestita, DC. ... ... „ 268
senecioides, DC. ... ... „ 672
senecionidea, Edgew. ... „ 298
sericans, *Hk. f.* ... ... „ 262
sessilifolia, Kurz ... ... „ 269
sikkimensis, *Hk. f.* ... ... „ 268
sonchifolia, DC. ... ... „ 264
spectabilis, *DC.* ... ... „ 269
spinellosa, DC. ... ... iii. 262, 672
subcapitata, *DC.* ... ... iii. 261
subsimplex, DC. ... iii. 265, 672
tenella, DC. ... ... iii. 671
trichophora, DC. ... ... „ 261
trigona, DC. ... ... „ 263
trisulca, DC. ... ... „ 259
vernonioides, DC. ... ... „ 271
villosa, Schultz ... ... „ 263
virens, *DC.* ... ... „ 264
viscosula, DC. ... ... iii. 265, 672
Wightiana, *DC.* ... ... iii. 261
Blumenbachia halepensis, Koel. ... ... vii. 182
Blumeodendron Tokbrai, Kurz v. 427
Blysmus, Panz. ... ... vi. 660
compressus, Panz. ... ... „ 660
rufus, Link ... ... „ 661
Blyxa, *Thouars* ... ... v. 660
ceylanica, *Hk. f.* ... ... „ 661
echinosperma, *Hk. f.* ... „ 661
Griffithii, *Planch.* ... ... „ 661
lancifolia, *Hk. f.* ... ... „ 661
octandra, Planch. ... ... „ 661
oryzetorum, *Hk. f.* ... ... „ 661
Roxburghii, *Rich.* ... ... „ 660
Talboti, *Hk. f.* ... ... „ 661

Vol. Page
Bobartia (lapsu. *Robartia*)
indica, Linn. ... ... vi. 602
Bobea glabra, Korth. ... ... iii. 127
Wallichiana, Korth. ... „ 127
Bobua laurina, DC. ... ... iii. 573
Bocagea, *St. Hil.* ... ... i. 92
coriacea, *Hk. f. & T.* ... „ 93
Dalzellii, *Hk. f. & T.* ... ... „ 92
elliptica, *Hk. f. & T.* ... „ 92
obliqua, *Hk. f. & T.* ... „ 93
Thwaitesii, *Hk. f. & T.* ... „ 92
Bœa, *Commers.* ... ... iv. 364
amplexicaulis, Parish ... „ 364
flocculosa, Clarke ... ... „ 365
herbacea, *Clarke* ... ... „ 365
multiflora, *Br.* ... ... „ 365
prolixa, *Clarke* ... ... „ 365
sp., Hk. f. & T. ... ... „ 365
Boehmeria, *Jacq.* ... ... v. 575
acuminata, Gaud. ... ... „ 566
alienata, Willd. ... ... „ 581
angustata, Hassk. ... ... „ 590
candicans, Hassk. ... ... „ 576
canescens, Wedd. ... ... „ 579
caudata, Poir. ... ... „ 578
caudigera, Wedd. ... ... „ 579
comosa, Wedd. ... ... „ 576
cuspidata, Bl. ... ... „ 580
dichotoma, Hassk. ... ... „ 590
didymogyne, *Wedd.* ... „ 576
diffusa, Wedd. ... ... „ 576
? *frondosa*, D. Don ... ... „ 581
frutescens, D. Don ... ... „ 592
Hamiltoniana, *Wedd.* ... „ 579
Helferii, *Bl.* ... ... „ 576
heteroidea, Bl. ... ... „ 579
Hugeliana, Bl. ... ... „ 580
hypoleuca, Hochst. ... ... „ 591
incana, Hassk. ... ... „ 589
interrupta, Willd. ... ... „ 549
javanica, Hassk. ... ... „ 549
Kurzii, *Hk. f.* ... ... „ 577
macrophylla, *D. Don* ... „ 577
macrostachya, Wedd. ... „ 578
malabarica, *Wedd.* ... ... „ 575
mauritiana, Wedd. ... ... „ 578
melastomoides, Griff. ... „ 583
nana, D. Don ... ... „ 581
nervosa, Madden ... ... „ 577
nivea, *Hook. & Arn.* ... ... „ 576
ourantha, Miq. ... ... „ 578
ovalis, Miq. ... ... „ 581
parvifolia, Wedd. ... ... „ 593
pauciflora, Bl. ... ... „ 593
penduliflora, Wedd. ... ... „ 577
platyphylla, *D. Don* ... ... „ 578
polystachya, *Wedd.* ... ... „ 579
Boehmeria Vol. Page
Puya, Hook. ... ... v. 592
ramiflora, Bedd. ... ... „ 575
rotundifolia, D. Don ... „ 579
rugosissima, Miq. ... ... „ 578
rugulosa, *Wedd.* ... ... „ 577
salicifolia, D. Don ... ... „ 591
sanguinea, Hassk. ... ... „ 581
scabrella, Gaud. ... ... „ 578
sidæfolia, *Wedd.* ... ... „ 576
spiciflora, Bl. ... ... „ 580
squamigera, Wedd. ... ... „ 580
subperforata, Wedd. ... „ 580
sylvatica, Hassk. ... ... „ 590
tenacissima, Gaud. ... ... „ 576
ternifolia, D. Don ... ... „ 579
tomentosa, Wedd. ... ... „ 578
travancorica, Bedd. ... ... „ 575
velutina, Dcne. ... ... „ 589
viminea, Wall. ... ... „ 581
Wightiana, Bl. ... ... „ 578
Bœica, *Clarke* ... ... iv. 362
filiformis, *Clarke* ... ... „ 362
fulva, *Clarke* ... ... „ 362
Griffithii, *Clarke* ... ... „ 362
hirsuta, *Clarke* ... ... „ 362
Bœninghausenia, *Rchb.* ... i. 486
albiflora, *Rchb.* ... ... „ 486
Boerhaavia, *Linn.* ... ... iv. 708
ascendens, Willd. ... ... „ 709
crispa, *Heyne* ... ... „ 709
diffusa, Linn. ... ... „ 709
elegans, *Chois.* ... ... „ 710
fruticosa, *Dalz.* ... ... „ 710
grandiflora, A. Rich. ... „ 710
hirsuta, Willd. ... ... „ 709
procumbens, Hb. Banks ... „ 709
repanda, *Willd.* ... ... „ 709
repanda, Wall. ... ... „ 709
repens, *Linn.* ... ... „ 709
repens, Delile ... ... „ 709
rubicunda, Steud. ... ... „ 710
rugosa, Rottl. ... ... „ 709
scandens, Gibs. ... ... „ 710
stellata, Wight ... ... „ 710
umbellata, Wight ... ... „ 709
verticillata, *Poir.* ... ... „ 710
viscosa, Lag. ... ... „ 709
Boissiera Danthoniæ, A. Br. vii. 362
Bolbophyllum *see* **Bulbophyllum** ... ... v. 752
Boltonia, *L'Hér.* ... ... ii. 249
indica, *Benth.* ... ... „ 249
BOMBACEÆ ... ... i. 318
Bombax, *Linn.* ... ... i. 349
Ceiba, Burm. ... ... „ 349
Gossypium, Linn. ... ... „ 190
heptaphyllum, Cav. ... ... „ 349

Bombax — Vol. Page
  insigne, *Wall.* iii. 349
  malabaricum, *DC.* „ 349
  orientale, Spreng. „ 350
  pentandrum, Linn. „ 350
Bonatea benghalensis, Griff. vi. 135
  herbacea, Wall. „ 135
  punduana, Lindl. „ 135
Bonnaya, *Link & Otto* iv. 284
  brachiata, *Link & Otto* „ 284
  brachiata, Benth. „ 284
  bracteata, Griff. „ 285
  ciliata, Spreng. „ 285
  cordifolia, Spreng. „ 282
  cyanea, Griff. „ 285
  grandiflora, Spreng. „ 285
  humilis, Spreng. „ 357
  hyssopoides, Benth. „ 283
  marginata, Spreng. „ 285
  minima, G. Don „ 286
  minima, Wight „ 284
  oppositifolia, *Spreng.* „ 286
  parviflora, Benth. „ 283
  peduncularis, *Benth.* „ 285
  procumbens, Benth. „ 285
  pulegiifolia, Spreng. „ 285
  punctata, G. Don „ 266
  pusilla, Benth. „ 284
  pusilla, Griff. „ 286
  reptans, *Spreng.* „ 284
  rigida, Benth. „ 285
  Rothii, Dietr. „ 285
  Roxburghiana, Dietr. „ 285
  ruelloides, Spreng. „ 285
  serrata, Griff. „ 284
  tenuifolia, *Spreng.* „ 286
  Vahlii, G. Don „ 281
  verbenæfolia, Benth. „ 285
  veronicæfolia, *Spreng.* „ 285
  Wightii, Benth. „ 285
BONNETIEÆ i. 280
Boorans, Hardwicke iii. 465
Boottia, *Wall.* v. 662
  cordata, *Wall.* „ 662
BORAGEÆ iv. 134
Boraginea, Edgew. iv. 169
Boraginea, Wall. iv. 143
BORAGINEÆ iv. 134
Borago africana, Linn. iv. 154
  indica, Linn. „ 153
  ? *spinulosa*, Roxb. „ 153
  verrucosa, Forsk. „ 154
  zeylanica, Linn. „ 154
BORASSEÆ vi. 405
Borassus, *Linn.* vi. 481
  æthiopum, Mart. „ 482
  dichotomus, White „ 482
  flabellifer, *Linn.* „ 482
Borassus — Vol. Page
  flabelliformis, Murr. vi. 482
  Gomutus, Lour. „ 421
Borreria gracilis, Miq. iii. 200
  ocymoides, DC. „ 200
  pusilla, DC. „ 200
  tetracocca, Thw. „ 48
Boschia, *Korth.* i. 351
  Griffithii, *Mast.* „ 352
Boschniackia, *C. A. Mey.* iv. 327
  glabra, C. A. Mey. „ 328
  himalaica, *Hk. f. & T.* „ 327
Bosea, Linn. iv. 716
  trinervia, Roxb. iv. 716, v. 483
Bosia, *Linn.* iv. 716
  Amherstiana, *Hk. f.* „ 716
  cypria, Boiss. „ 716
  Yerva-mora, Linn. „ 716
Boswellia, *Roxb.* i. 527
  glabra, Roxb. „ 528
  serrata, *Roxb.* „ 528
  thurifera, Roxb. „ 528
Bothriospermum, *Bunge* iv. 167, 734
  asperugoides, Sieb. & Zucc. iv. 167
  ? *marifolium*, A. DC. „ 152
  tenellum, *Fisch. & Mey.* „ 167
Botryadenia Gmelini, Fisch. & Mey. iii. 247
Botryolotus cachemyrianus, J. & S. ii. 88
Botryophora, *Hk. f.* v. 476
  Kingii, *Hk. f.* „ 476
Botryosicyos pentaphyllus, Hochst. vi. 289
Boucerosia, *W. & A.* iv. 77
  adscendens, Wall. „ 76
  Aucheriana, *Dcne.* „ 78
  campanulata, Wight „ 77
  crenulata, *W. & A.* „ 77
  diffusa, *Wight* „ 78
  edulis, Edgew. „ 76
  Hitchinia, *Dcne.* „ 78
  lasiantha, Wight „ 78
  pauciflora, *Wight* „ 78
  Stocksiana, Boiss. „ 76
  umbellata, *W. & A.* „ 77
Bouchea, *Cham.* iv. 564
  hyderabadensis, *Walp.* „ 564
  marrubiifolia, *Schau.* „ 564
Bouea, *Meissn.* ii. 20
  Brandisiana, Kurz „ 21
  burmanica, *Griff.* „ 21
  diversifolia, Miq. „ 21
  ? *gandaria*, Bl. „ 21
  macrophylla, *Griff.* „ 21
  microphylla, *Griff.* ii. 21, iii. 611
  ? *myrsinoides*, Bl. ii. 21
  oppositifolia, Meissn. „ 21

Vol. Page
Boymia glabrifolia, Champ. i. 490
rutæcarpa, Juss. ... ... „ 490
Brachiaria eruciformis, Griseb. vii. 28
Brachyactis, *Led.* ... ... iii. 253
indica, Clarke ... ... „ 253
menthodora, *Benth.* ... „ 253
robusta, *Benth.* ... ... „ 254
umbrosa, *Benth.* ... ... „ 253
wangtuensis, Clarke (vide Conyza) ... ... „ 253
Brachycome, *Cass.* ... ... iii. 248
? assamica, *Clarke* ... ... „ 248
Brachycoris parviflora, Schrad. iv. 262
Brachylepis, *W. & A.* ... ... iv. 7
nervosa, *W. & A.* ... ... „ 7
Brachynema, Griff. ... ... iv. 600
ferruginea, Griff. ... ... „ 600
Brachypodium, *Beauv.* ... vii. 362
Barrelieri, R. & S. ... ... „ 363
cæspitosum, R. & S. ... ... „ 363
constrictum, Presl ... ... „ 363
corniculatum, DC. ... ... „ 363
Fontanesianum, Nees ... „ 363
Fontanesii, Nees ... ... „ 363
gracile, Beauv. ... ... „ 363
longearistatum, Boiss. ... „ 368
nepalense, Nees ... ... „ 363
pinnatum, *Beauv.* ... ... „ 363
rupestre, R. & S. ... ... „ 363
scaberrimum, W. & A. ... „ 363
sylvaticum, *Beauv.* ... ... „ 362
tataricum, Munro ... ... „ 373
tenellum, R. & S. ... ... „ 356
tenuiflorum, R. & S. ... ... „ 356
Wattii, Clarke ... ... „ 363
Brachypterum Benthami, Thw. ii. 242
canarense, Dalz. & Gibs. ... „ 246
elegans, Thw. ... ... „ 240
robustum, Dalz. & Gibs. ... „ 241
scandens, Dalz. & Gibs. ... „ 240
Brachyramphus, DC. ... ... iii. 403
Heyneanus, Wight ... ... „ 403
obtusus, DC. ... ... „ 416
sonchifolius, DC. ... ... „ 403
sonchifolius, Thw. ... ... „ 403
taraxacoides, DC. ... ... „ 403
Brachyspatha sylvatica, Schott vi. 518
zeylanica, Schott ... ... „ 518
Brachystelma, *Br.* ... ... iv. 64
attenuatum, *Hk. f.* ... ... „ 65
Beddomei, *Hk. f.* ... ... „ 66
glabrum, *Hk. f.* ... ... „ 65
lævigatum, *Hk. f.* ... ... „ 65
maculatum, *Hk. f.* ... ... „ 65
parviflorum, *Hk. f.* ... ... „ 65
volubile, *Hk. f.* ... ... „ 65
Brachystemma, *D. Don* ... i. 235
Brachystemma Vol. Page
calycinum, *D. Don* ... ... i. 235
Brachytome, *Hk. f.* ... ... iii. 108
Wallichii, *Hk. f.* ... ... „ 108
Bradleia coccinea, Wall. ... v. 308
coriacea, Wall. ... ... „ 460
coronata, Wall. ... v. 324, 326
dioica, Vahl ... ... v. 328
Finlaysoniana, Wall. ... „ 323
hirsuta, Roxb. ... ... „ 311
lævigata, Wall. ... ... „ 319
lanceolaria, Roxb. ... ... „ 308
lanceolaria, Wall. v. 314, 317, 318
littorea, Steud. ... ... „ 308
mollis, Wall. ... ... „ 311
multilocularis, Spreng. ... „ 307
nitida, Roxb. ... ... „ 311
nitida, Wall. ... ... „ 307
obliqua, Spreng. ... ... „ 311
obliqua, Wight ... ... „ 308
obtusa, Wall. ... ... „ 308
ovata, Wall. ... ... „ 322
philippensis, Ham. ... ... „ 307
pinnata, Roxb. ... ... „ 317
pubera, Roxb. ... ... „ 307
Wightiana, Wall. ... ... „ 321
zeylanica, Gærtn. ... ... „ 311
Bragantia, *Lour.* ... ... v. 72
brachycarpa, Thw. ... ... „ 73
corymbosa, *Griff.* ... ... „ 73
Dalzellii, *Hk. f.* ... ... „ 73
hispida, Thw. ... ... „ 73
khasiana, Griff. ... ... „ 73
latifolia, Lindl. ... ... „ 73
melastomæfolia, Duchart. „ 73
siliquosa, Miq. ... ... „ 73
tomentosa, *Bl.* ... ... „ 73
Wallichii, *Br.* ... ... „ 73
sp., Br. ... ... „ 73
Bramia indica, Lamk. ... ... iv. 272
Brandisia, *Hk. f. & T.* ... iv. 257
discolor, *Hk. f. & T.* ... „ 257
discolor, Hance ... ... „ 257
Hancei, Hk. f. ... ... „ 257
Brandtia holcoides, Kunth ... vii. 71
Brasenia, *Schreb.* ... ... i. 113
peltata, *Pursh.* ... ... „ 113
Brassaia, *Endl.* ... ... ii. 732
actinophylla, Endl. ... ... „ 732
capitata, *Clarke* ... ... „ 732
Brassaiopsis, *Dcne. & Planch.* ii. 735
aculeata, *Seem.* ... ... „ 738
alpina, *Clarke* ... ... „ 736
confluens, Seem. ... ii. 732, 735
floribunda, Seem. ... ... ii. 737
Griffithii, *Clarke* ... ... „ 736
Hainla, *Seem.* ... ... „ 735
hispida, *Seem.* ... ... „ 736

Brassaiopsis Vol. Page
Hookeri, *Clarke* ... ... ii. 737
mitis, *Clarke* ... ... „ 736
palmata, *Kurz* ... ... „ 735
simplicifolia, *Clarke* ... „ 735
speciosa, *Dcne. & Planch.* „ 737
Brassica, *Linn.* ... . i. 155
alba, *Hk. f. & T.* ... ... „ 157
arvensis, Linn. ... ... „ 158
campestris, *Linn.* ... ... , 156
Eruca, Linn. ... ... „ 158
erucoides, Roxb. ... ... „ 158
foliosa, Willd. ... ... „ 157
Griffithii, Hk. f. & T. ... „ 157
juncea, *Hk. f. & T.* ... ... „ 157
Napus, Linn. ... ... „ 156
nigra, *Koch* ... ... „ 156
oleracea, Linn. ... ... „ 156
quadrivalvis, *Hk. f. & T.* ... „ 156
Rapa, Linn. ... ... „ 156
Stocksii, Hk. f. & T. ... „ 156
Tournefortii, *Gouan* ... „ 156
trilocularis, *Hk. f. & T.* ... „ 156
Willdenovii, Boiss. ... ... „ 157
BRASSICEÆ ... ... i. 129
Brathys nepalensis, Bl. ... i. 256
Braya, *Sternb. & Hoppe* ... i. 155
alpina, *St. & H.* ... ... „ 155
glabella, Richards. ... ... „ 155
? *oxycarpa*, Hk. f. & T. ... „ 155
rosea, *Bunge* ... ... „ 155
Thomsoni, Hk. f. & T. ... „ 155
tibetica, *Hk. f. & T.* ... „ 155
uniflora, *Hk. f. & T.* ... „ 155
Breweria, *R. Br.* ... ... iv. 223
cordata, *Bl.* ... ... „ 223
elegans, *Chois.* ... ... „ 224
evolvuloides, *Chois.* ... „ 224
latifolia, *Benth.* ... ... „ 224
Roxburghii, Chois. ... ... „ 223
Brewstera crenata, Roem. ... i. 416
Breynia, *Forst.* ... ... v. 329
angustifolia, *Hk. f.* ... ... „ 330
cernua, *Muell.* ... ... „ 331
coronata, *Hk. f.* ... ... „ 330
discigera, *Muell.* ... ... „ 331
fruticosa, Hk. f. ... ... „ 331
oblongifolia, Muell. ... ... „ 330
paniculata, Spreng. ... ... „ 332
patens, *Benth.* ... ... „ 329
racemosa, Muell. ... ... „ 331
reclinata, *Hk. f.* ... ... „ 331
rhamnoides, *Muell.* ... „ 330
virgata, Muell. ... ... „ 331
Bridelia, *Willd.* ... ... v. 267
acuminata, Wall. ... ... „ 323
alnifolia, *Griff.* ... ... „ 274
amœna, Kurz ... ... „ 269

Bridelia Vol. Page
amœna, Wall. ... ... v. 268
assamica, *Hk. f.* ... ... „ 269
Berryana, Wall. ... ... „ 305
burmanica, *Hk. f.* ... ... „ 269
chartacea, Kurz... ... ... „ 269
chartacea, Wall. ... ... „ 275
cinnamomea, *Hk. f.* ... ... „ 273
collina, Hk. & Arn. ... ... „ 274
crenulata, Roxb. ... ... „ 268
Curtisii, *Hk. f.* ... ... „ 273
dasycalyx, *Kurz* ... ... „ 271
glauca, Bl. ... ... v. 272, 310
Griffithii, *Hk. f.* ... ... v. 272
Hamiltoniana, *Wall.* ... „ 271
heterantha, Wall. ... ... „ 315
Kurzii, *Hk. f.* ... ... „ 272
? *lanceæfolia*, Roxb. ... „ 271
lancifolia, Ham. ... ... „ 271
Loureirii, Hk. & Arn. ... „ 271
minutiflora, *Hk. f.* ... ... „ 273
montana, *Willd.* ... ... „ 269
montana, Wall. ... ... „ 268
Moonii, *Thw.* ... ... „ 268
oblongifolia, Hk. & Arn. „ 275
ovata, *Dcne.* ... ... „ 274
ovata, Kurz ... ... „ 272
patula, Hk. & Arn. ... ... „ 279
penangiana, *Hk. f.* ... ... „ 272
pubescens, *Kurz* ... v. 270, 282
pustulata, *Hk. f.* ... ... v. 271
retusa, *Spreng.* ... ... „ 268
retusa, Baill. ... ... „ 269
retusa, A. Juss.... ... ... „ 270
rhamnoides, Griff. ... ... „ 271
rufa, *Hk. f.* ... ... „ 273
scandens, Willd. ... ... „ 270
sinica, Grah. ... ... „ 274
spinosa, Roxb. ... ... „ 268
stipularis, *Bl.* ... ... „ 270
stipularis, Hk. & Arn. ... „ 282
tomentosa, *Bl.* ... ... „ 271
urticoides, *Griff.* ... ... „ 274
Zollingeri, Miq.... ... ... „ 270
Brindonia indica, Thouars... i. 261
Briza, *Linn.* ... ... vii. 336
bipinnata, Linn. ... ... „ 325
Eragrostis, Linn. ... ... „ 320
Eragrostis, Vill. ... ... „ 321
maxima, Linn. ... ... „ 336
media, *Linn.* ... ... „ 336
minor, Linn. ... ... „ 336
oblonga, Moench ... ... „ 320
rubra, Lamk. ... ... „ 317
Brizopyrum mucronatum, Nees ... ... vii. 328
Bromheadia, *Lindl.* ... ... vi. 20
? aporoides, *Rchb. f.* ... „ 20

Bromheadia Vol. Page
Finlaysoniana, Rchb. f. ... vi. 20
palustris, *Lindl.* ... „ 20
Bromus, *Linn.* ... vii. 357
abortiflorus, St. Am. ... „ 359
alopecuroides, Lagasc. ... „ 309
altissimus, Weber ... „ 358
anatolicus, Boiss. ... „ 361
annuus, Jacq. ... „ 361
arenaceus, Pourr. ... „ 359
arenarius, Thom. ... „ 360
arvensis, Duthie ... „ 361
asper, *Murray* ... „ 358
asper, Hk. f. & T. ... „ 358
atticus, Steud. ... „ 360
chapprianus, De Not. ... „ 361
chrysopogon, Viv. ... „ 360
ciliatus, Linn. ... „ 357
commutatus, M. Bieb. ... „ 361
compactus, Hort. ... „ 360
confertus, Bieb. ... „ 360
confinis, Nees ... „ 358
confinis, Strach. & Winterb. „ 359
crinitus, *Boiss. & Hoh.* ... „ 359
Cyri, C. A. Mey. ... „ 361
dactyloides, Roth ... „ 309
Danthoniæ, Trin. ... „ 362
dubius, Jacquem. ... „ 373
dumetorum, Lamk. ... „ 358
dumosus, Vill. ... „ 363
erectus, Moris ... „ 360
Ferronii, Mabelli ... „ 360
giganteus, Linn. ... „ 353
giganteus, Vill. ... „ 358
glomeratus, Tausch. ... „ 360
gracilis, Leyss. ... „ 363
gracilis, Weig. ... „ 363
gracillimus, Bunge ... „ 359
himalaicus, *Stapf* ... „ 358
hirsutissimus, Cyrill. ... „ 358
hirsutus, Curt. ... „ 358
humilis, Cav. ... „ 360
hordeaceus, Linn. ... „ 360
inermis, *Leyss.* ... „ 357
japonicus, Thunb. ... „ 361
Kochii, C. Gmel. ... „ 361
lateripronus, St. Laz. ... „ 359
littoreus, Georgi ... „ 357
macrostachys, *Desf.* ... „ 362
membranaceus, Jacquem. „ 362
mollis, *Linn.* ... „ 360
mollis, Duthie ... „ 361
montanus, Scop. ... „ 358
multiflorus, Host ... „ 361
multiflorus, Kar. & Kir. ... „ 361
Munroi, Boiss. ... „ 358
Myurus, Heyne ... „ 287
nanus, Weig. ... „ 360

Bromus Vol. Page
nemoralis, Huds. ... vii. 358
nemorosus, Vill. ... „ 358
oxyodon, *Schrenk* ... „ 361
patulus, *Mert. & Koch* ... „ 361
patulus, Duthie ... „ 360
pendulus, Schk. ... „ 361
phrygius, Boiss. ... „ 361
pinnatus, Fl. Dan. ... „ 363
pinnatus, Linn. ... „ 363
polymorphus, Hoh. ... „ 361
polystachios, Forsk. ... „ 329
Pseudo-asper, Schur ... „ 358
pubescens, Jacquem. ... „ 358
purpurascens, Turcz. ... „ 357
ramosus, Huds. ... „ 358
? *rubens*, Cav. ... „ 360
scabrifolius, Opiz ... „ 359
Schraderi, Kunth ... „ 357
scoparius, *Linn.* ... „ 360
secalinus, M. Bieb. ... „ 361
serotinus, Benek. ... „ 358
silvaticus, Pollich ... „ 363
simplicissimus, Ces. ... „ 360
squarrosus, Royle ... „ 361
tataricus, Jacquem. ... „ 369
tectorius, Dulac ... „ 359
tectorum, *Linn.* ... „ 359
tomentellus, Duthie ... „ 361
triflorus, Linn. ... „ 353
unilateralis, Schur ... „ 361
unioloides, H. B. K. ... „ 357
? *variegatus*, Griseb. ... „ 357
velutinus, Nocc. & Balb. ... „ 361
villiferus, Steud. ... „ 361
sp., Hk. f. & T. vii. 350, 351, 354, 358
Brongniartia coriacea, Bl. ... v. 114
Brotera ovata, Cav. ... i. 372
bracteosa, Guill. & Perr. ... „ 373
Broughtonia ? fusca, Wall. ... v. 844
linearis, Wall. ... „ 836
pendula, Wall. ... „ 843
Broussonetia, *Vent.* ... v. 490
papyrifera, *Vent.* ... „ 490
Brownlowia, *Roxb.* ... i. 381
elata, *Roxb.* ... „ 381
lanceolata, *Benth.* ... i. 381, 517
Brownlowieæ ... i. 380
Brucea, *Mill.* ... i. 520
dubia, Steud. ... „ 520
mollis, *Wall.* ... „ 521
sumatrana, *Roxb.* ... „ 521
sp., Wall. ... „ 520
Bruguiera, *Lam.* ... ii. 437
caryophylloides, *Bl.* ... „ 438
eriopetala, *W. & A.* ... „ 438
gymnorhiza, *Lamk.* ... „ 437
madagascariensis, DC. ... „ 452

Bruguiera Vol. Page
malabarica, *Arn.* ii. 438
parietosa, Griff. „ 438
parviflora, *W. & A.* „ 438
Rheedii, Miq. „ 437
Rumphii, Bl. „ 438
Wightii, Bl. „ 437
Brunella, *Linn.* iv. 670
hispida, Benth. „ 671
ovata, Wall. „ 671
vulgaris, *Linn.* „ 670
Bruniera vivipara, Franch. vi. 558
Bryobium, Lindl. v. 785
Bryocarpum, *Hk. f. & T.* iii. 501
himalaicum, *Hk. f. & T.* „ 501
Bryomorpha rupifraga, Kar. & Kir. i. 243
Bryonia, *Linn.* ii. 622
alceæfolia, Hb. Rottl. „ 621
althæoides, DC. „ 623
amplexicaulis, Lamk. „ 625
callosa, Hb. Rottl. „ 619
cheirophylla, Wall. „ 614
cissoides, Wall. „ 624
cochinchinense, Lour. „ 611
deltoidea, Arn. „ 626
dioica, Jacq. *see Errata* „
epigæa, Rottl. „ 628
filicaulis, Wall. „ 627
? *filiformis*, Roxb. „ 624
Garcini, DC. „ 630
glabra, Roxb. „ 628
gracilis, Wall. „ 623
grandis, DC. „ 621
grandis, Linn. „ 621
grandis, Wall. ii. 611, 617
heterophylla, Wall. „ 611, 629
Hookeriana, W. & A. ii. 624
laciniosa, *Linn.* „ 622
leiosperma, W. & A. „ 623
maderaspatana, DC. „ 623
Moimoi, Ser. „ 621
mucronata, Bl. „ 624
mysorensis, Miq. „ 623
mysorensis, Wall. „ 624
nepalensis, Ser. „ 625
odorata, Ham. „ 626
odorata, Wall. „ 626
? *oxyphylla*, Wall. „ 624
palmata, Wall. ii. 607, 611, 621
? *pedunculosa*, Ser. ii. 613
Perrottetiana, Ser. „ 627
pilosa, Roxb. „ 627
Rheedii, Bl. „ 625
rostrata, Rottl. „ 627
sagittata, Bl. „ 625
scabrella, Linn. f. „ 623
sinuata, Wall. „ 628
Bryonia Vol. Page
sinuosa, Wall. ii. 625
tenella, Roxb. „ 626
triflora, Wall. „ 626
tubiflora, W. & A. „ 611
umbellata, Klein „ 625
umbellata, Wall. „ 609
Wightiana, Wall. „ 623
Bryonopsis courtallensis, Arn. ii. 623
erythrocarpa, Naud. „ 623
laciniosa, Hk. f. „ 623
Bryophyllum, *Salisb.* ii. 413
calycinum, *Salisb.* „ 413
pinnatum, Kurz „ 413
Bubroma (*Buboma*) *tomentosa*, Spreng. i. 375
Buchanania, *Roxb.* ii. 22
acuminata, *Turcz.* „ 24
? *acuminata*, Wall. ii. 14, 24
angustifolia, *Roxb.* ii. 23
arborescens, Bl. „ 24
auriculata, Bl. „ 41
bancana, Miq. „ 24
glabra, *Wall.* „ 23
intermedia, Wight „ 24
lanceolata, *Wight* „ 24
lancifolia, *Roxb.* „ 24
latifolia, *Roxb.* „ 23
laxiflora, *Kurz* „ 24
longifolia, Bl. „ 24
lucida, *Bl.* „ 23
macrophylla, Bl. „ 41
palembanica, Bl.? „ 24
petiolaris, Miq. „ 24
sessilifolia, Bl. „ 24
spicata, Roxb. i. 559
subobovata, Griff. ii. 24
zeylanica, Bl. „ 16
Buchnera, *Linn.* iv. 297
angustifolia, D. Don „ 299
asiatica, Linn. „ 299
bifida, Ham. „ 299
coccinea, Benth. „ 299
cruciata, *Ham.* „ 298
densiflora, Benth. „ 299
densiflora, Hk. & Arn. „ 298
euphrasioides, Vahl. „ 299
hispida, *Ham.* „ 298
hyderabadensis, Roth „ 299
longiflora, Arn. „ 300
Masuria, Ham. „ 300
orobanchoides, Br. „ 299
phœnicea, Benth. „ 299
Schimperiana, Hochst. „ 298
stricta, Benth. „ 298
sumatrana, Miq. „ 298
tetrasticha, *Benth.* „ 298
Wallichii, Benth. „ 300

Vol. Page
Bucklandia, *Br.* ... ... ii. 429
  populifolia, Hk. f. & T. ... „ 429
  populnea, *Br.* ... ... „ 429
Buddleia, *Linn.* ... ... iv. 81
  acuminatissima, Bl.... ... „ 82
  asiatica, *Lour.* ... ... „ 82
  Colvilei, *Hk. f.* .. ... „ 81
  crispa, Benth. ... ... „ 81
  discolor, Roth ... . „ 82
  macrostachya, *Benth.* ... „ 81
  Martii, T. A. Schmidt ... „ 81
  Neemda, Ham. ... ... „ 82
  nepalensis, Colla ... ... „ 81
  paniculata, *Wall.* ... ... „ 81
  salicina, Lamk. ... ... „ 82
  serrulata, Roth. ... ... „ 82
  subserrata, D. Don ... ... „ 82
  virgata, Blanco ... ... „ 82
  sp., Griff. ... ... „ 699
Buettneria, *Linn.* ... ... i. 376
  andamanensis, *Kurz* ... „ 377
  aspera, *Colebr.* ... ... „ 377
  catalpifolia, Wall. ... ... „ 376
  crenulata, *Wall.* ... ... „ 376
  echinata, Wall. ... ... „ 376
  elliptica, *Mast.* ... ... „ 377
  grandifolia, DC. ... ... „ 377
  herbacea, *Roxb.* ... ... „ 376
  hypoleuca, Turcz. ... ... „ 378
  Jackiana, *Wall.* ... ... „ 376
  Maingayi, *Mast.* ... ... „ 377
  nepalensis, Turcz. ... ... „ 377
  pilosa, *Roxb.* ... . „ 377
  polyacantha, Wall. ... ... „ 376
  uncinata, *Mast.* ... ... „ 377
  velutina, Wall. ... ... „ 377
BUETTNERIEÆ ... ... i. 354
Bulbillaria gageoides, Zucc. vi. 356
Bulbophyllopsis (*Bolbophyllopsis*) *maculosa*, Rchb. f. v. 776
  Morphologorum, R. f. ... „ 776
Bulbophyllum, *Thouars* ... v. 752
  adenopetalum, *Lindl.* ... „ 770, vi. 188, 189
  affine, *Lindl.* ... ... v. 756
  albidum, *Hk. f.* ... ... „ 757
  alcicorne, *Par. & R. f.* ... „ 766
  alopecurum, *Rchb. f.* ... „ 770
  amplum, Rchb. f. ... ... „ 712
  apodum, *Hk. f.* ... v. 766, vi. 188
  auricomum, *Lindl.* ... ... v. 765
  bicolor, *Hk. f.* ... ... „ 770
  bisetum, *Lindl.* ... ... „ 767
  bootanense, Par. & R. f. ... „ 775
  candidum, *Hk. f.* ... v. 770, vi. 189
  capillipes, *Par. & R. f.* ... v. 755
  capitatum, *Lindl.* ... ... „ 759
Bulbophyllum Vol. Page
  Careyanum, *Spreng.* v. 760, vi. 188
  Careyanum, Wall. ... ... v. 760
  cariniflorum, Rchb. f. ... „ 767
  caudatum, *Lindl.* ... ... „ 759
  cauliflorum, *Hk. f.* v. 758, vi. 187
  cirrhatum, *Hk. f.* v. 769, vi. 189
  cirrhopetaloides, Griff. ... v. 767
  clandestinum, *Lindl.* v. 753, vi. 187, 198
  Clarkei, Rchb. f. ... ... v. 769
  comosum, *Coll. & Hemsl.* „ 762
  conchiferum, *Rchb. f.* v. 766, vi. 188
  concinnum, *Hk. f.* ... ... vi. 187
  confertum, *Hk. f.* v. 757, vi. 187
  cornutum, Rchb. f. ... ... v. 774
  crassifolium, *Thw.* ... ... „ 770
  crassipes, *Hk. f.* ... ... „ 760
  cupreum, *Lindl.* v. 761, vi. 188
  cupreum, Hook. ... ... v. 760
  cylindraceum, *Lindl.* ... „ 765
  Dayanum, *Rchb. f.* ... ... „ 756
  elegans, *Gard.* ... ... „ 770
  Elliæ, Rchb. f. ... ... „ 777
  Epicrianthes, *Hk. f.* ... „ 753
  eublepharum, *Rchb. f.* ... „ 764
  fimbriatum, Rchb. f. ... „ 774
  fænisecii, Par. & R. f. ... „ 765
  fuscescens, Rchb. f. ... ... „ 712
  fusco-purpureum, *Wight* „ 760
  Globulus, *Hk. f.* ... v. 767, vi. 189
  gracile, *Par. & R. f.* ... v. 762
  grandiflorum, Griff. ... ... „ 769
  Griffithianum, Par. & Rchb. f. ... ... „ 774
  Griffithii, *Rchb. f.* ... ... „ 756
  guttulatum, Wall. ... ... „ 776
  gymnopus, *Hk. f.* v. 764, vi. 188
  Henshalli, Lindl. ... ... v. 755
  hirtum, *Lindl.* ... ... „ 762
  hymenanthum, *Hk. f.* v. 767, vi. 188
  imbricatum, Griff. ... ... v. 765
  iners, *Rchb. f.* ... ... „ 771
  kaitiense, Rchb. f. ... ... „ 778
  khasianum, Griff. ... ... „ 765
  khasyanum, Rchb. f. ... „ 765
  Kingii, *Hk. f.* ... v. 760, vi. 188
  lasianthum, *Lindl.* ... ... v. 763
  lasiochilum, *Par. & Rchb. f.* „ 772
  lemniscatum, *Par.* ... ... „ 762
  leopardinum, *Lindl.* ... „ 756
  leptanthum, *Hk. f.* ... v. 759, 910, vi. 188
  leptosepalum, *Hk. f.* v. 767, vi. 188
  limbatum, *Lindl.* ... ... v. 763
  limbatum, Par. & Rchb. f. „ 761
  Lindleyanum, *Griff.* ... „ 763
  Lobbii, *Lindl.* ... v. 755, vi. 187

Bulbophyllum Vol. Page
longipes, Rchb. f. ... ... v. 771
Macræi, Rchb. f. ... ... vi. 190
macranthum, *Lindl.* v. 753, vi. 188
Mannii, *Rchb. f.* ... ... v. 780
Medusæ, *Rchb. f.* v. 757, vi. 187
megalanthum, *Griff.* v. 754, vi. 187
membranifolium, *Hk. f.* ... v. 756, vi. 187
merguense, *Par. & Rchb. f.* v. 772
micranthum, *Hk. f.* v. 768, vi. 189
microtepalum, *Rchb. f.* ... v. 761
mishmeense, *Hk. f.* ... ... „ 769
modestum, *Hk. f.* v. 759, vi. 187
moniliforme, *Par. & Rchb. f.* v. 757
? *moulmeinense*, Rchb. f.... „ 781
? *muscicola*, Rchb. f. ... „ 776
nasutum, *Rchb. f.* ... ... „ 754
nilgherrense, *Wight* ... „ 761
oblongum, Rchb. f. ... ... „ 780
odoratissimum, *Lindl.* ... „ 758
oligoglossum, *Rchb. f.* ... „ 771
paleaceum, *Benth.* ... ... „ 769
parviflorum, *Par. & Rchb. f.* ... ... „ 763
patens, *King* ... ... vi. 187
Penicillium, *Par. & Rchb. f* v. 764
petiolare, *Thw.* ... ... „ 759
pictum, Par. & Rchb. f. ... „ 781
picturatum, Rchb. f.... ... „ 775
pileatum, *Lindl.* ... ... „ 754
polyrhizum, *Lindl.* ... ... „ 767
protractum, *Hk. f.* v. 754, vi. 187
psittacoglossum, *Rchb. f.* v. 754
Psychoon, *Rchb. f.* ... ... „ 771
purpureum, *Thw.* ... ... „ 768
radiatum, *Lindl.* ... ... „ 758
refractum, Rchb. f. ... ... „ 779
Reinwardtii, *Rchb. f.* ... „ 754
repens, *Griff.* ... ... „ 765
reptans, *Lindl.*... ... ... „ 768
rotundatum, Rchb. f. ... „ 712
Roxburghii, Rchb. f. ... „ 774
rufilabrum, *Par.* ... ... „ 761
rufinum, *Rchb. f.* ... ... vi. 188
rufinum, Rchb. f. ... ... v. 766
scabratum, Rchb. f.... ... „ 775
Schmidtianum, *Rchb. f.* ... „ 771
secundum, *Hk. f.* v. 764, vi. 188
siamense, Rchb. f. ... ... v. 755
sicyobulbon, *Par. & R. f.* „ 761
Sillenianum, *Rchb. f.* v. 771, vi. 189
stenobulbon, *Par. & R. f.* v. 758
striatellum, *Ridl.* ... ... vi. 189
striatum, *Rchb. f.* ... ... v. 755
suave, Griff. ... ... „ 762
suavissimum, *Rolfe* ... ... „ 768
Thomsoni, *Hk. f.* v. 764, vi. 188

Bulbophyllum Vol. Page
tremulum, *Wight* ... ... v. 763
tripudians, Par. & Rchb. f. „ 779
trisetosum, Griff. ... ... „ 753
triste, *Rchb. f.* ... ... „ 768
umbellatum, Lindl. ... ... „ 776
uniflorum, *Griff.* ... ... „ 755
vaginatum, Rchb. f.... ... „ 773
vermiculare, *Hk. f.* ... ... vi. 188
virens, *Hk. f.* ... ... v. 770
Walkerianum, Rchb. f. ... „ 780
Wightii, Rchb. f. ... ... „ 773
Wrayi, *Hk. f.* ... v. 766, vi. 188
xylophyllum, *Par. & Rchb. f.* v. 766
sp., Griff. ... ... v. 756, 764, 767
Bulbostylis, *Kunth* ... ... vi. 651
barbata, *Kunth* ... ... „ 651
capillaris, *Kunth* ... ... „ 652
nudipes, Kunth ... ... „ 651
puberula, *Kunth* ... ... „ 652
pulchella, Thw. ... ... „ 652
subspinescens, *Clarke* ... „ 652
trifida, Kunth ... ... „ 652
Wallichiana, Kunth ... „ 651
Willdenowii, Kunth ... „ 651
Bunium aromaticum, Linn. ii. 682
Bulbocastanum, Linn. ... „ 681
Bupleurum, *Linn.* ... ... ii. 674
baldense, Host ... ... „ 676
distichophyllum, *W. & A.* „ 677
diversifolium, *Roche* ... „ 675
Candollii, *Wall.* ... ... „ 674
falcatum, *Linn.* ... ... „ 676
flexuosum, Wall. ... ... „ 677
gracillimum, Klotz. ... „ 676
heterophyllum, Jacquem. „ 675
himalensis, Klotz. ... ... „ 677
Hoffmeisteri, Klotz. ... ... „ 676
imaicolum, A. Kerner ... „ 676
jucundum, *Kurz* ... ... „ 675
lanceolatum, *Wall.* ... ... „ 674
longicaule, *Wall.* ... ... „ 677
Maddeni, *Clarke* ... ... „ 678
marginatum, Wall. ... ... „ 676
mucronatum, *W. & A.* ... „ 676
nervosum, Moon ... ... „ 676
nigrocarpum, Jacquem. ... „ 676
plantaginifolium, *Wight* „ 674
polyphyllum, Ledeb. ... „ 675
ramosissimum, W. & A. ... „ 676
rupestre, Edgew. ... ... „ 677
sachalinense, F. Schmidt „ 675
setaceum, *Fenzl* ... ... „ 678
tenue, *D. Don* ... ... „ 677
Thomsoni, *Clarke* ... ... „ 675
trichopodum, Boiss. & Sprun. ... ... „ 678
virgatum, W. & A. ... ... „ 676

Bupleurum ... Vol. Page
virgatum, Wall. ... ... ii. 676
sp., Hk. f. & T. ... ... „ 678
Burmannia, *Linn.* ... ... v. 664
azurea, Griff. ... ... „ 665
bifurca, Herb. Ham. ... „ 665
candida, *Griff.* ... ... „ 665
Championii, *Thw.* ... ... „ 666
cœlestis, *D. Don* ... ... „ 665
distachya, Br. ... ... „ 664
disticha, *Linn.* ... ... „ 664
javanica, Bl. ... ... „ 665
longifolia, *Becc.* ... ... „ 664
nepalensis, *Hk. f.* ... ... „ 666
Pseudo-alata, Champ. ... „ 666
pusilla, *Thw.* ... ... „ 665
sumatrana, Miq. ... ... „ 664
triflora, Roxb. ... ... „ 665
uniflora, Herb. Rottl. ... „ 665
Wallichii, *Hk. f.* ... ... „ 666
sp., Griff. ... ... „ 666
BURMANNIACEÆ ... ... v. 664
Bursera, *Linn.* ... ... i. 530
serrata, *Wall.* ... ... i. 508, 530
BURSERACEÆ... ... ... i. 527
Bursinopetalum arboreum, Wight ... ... ii. 745
tetrandum, Wight ... ... „ 745
Busea decurrens, Miq. ... ... iv. 370
subsessilis, Miq. ... ... „ 370
Butea, *Roxb.* ... ... ii. 194
acuminata, Wall. ... ... „ 194
frondosa, *Roxb.* ... ... „ 194
frondosa, Wall. ... ... „ 195
gyrocarpa, Wall. ... ... „ 193
minor, *Ham.* ... ... „ 195
parviflora, Roxb. ... ... „ 193
sericophylla, Wall. ... ... „ 193
superba, *Roxb.* ... ... „ 195
Buteræa rhamnifolia, Nees ... iv. 433
ulmifolia, Nees ... ... „ 430
Butinia capnoides, Dcne. ... ii. 691
libanotica, Boiss. ... ... „ 673
BUTOMEÆ ... ... vi. 559
Butomopsis, *Kunth* ... ... vi. 562
lanceolata, *Kunth* ... ... „ 562
? *latifolia*, Kunth ... ... „ 562
Butomus, *Linn.* ... ... vi. 562
Dobia, Ham. ... ... „ 562
lanceolatus, Roxb. ... ... „ 562
latifolius, D. Don ... ... „ 562
umbellatus, *Linn.* ... ... „ 562
Butonica, Juss. ... ... ii. 507
alata, Miers ... ... „ 508
alba, Miers ... ... ii. 507, 508
ceylanica, Miers ... ... ii. 508
inclyta, Miers ... ... „ 507
racemosa, Miers ... ... „ 507
Butonica Vol. Page
rubra, Miers ... ... ii. 507
BUXEÆ ... ... v. 240
Buxus, *Linn.* ... ... v. 267
coriacea, Spreng. ... ... „ 266
emarginata, Royle ... ... „ 267
japonica, Muell. ... ... „ 267
longifolia, Jacquem. ... „ 267
saligna, D. Don ... ... „ 266
sempervirens, *Linn.* ... „ 267
Wallichiana, Baill. ... ... „ 267
sp., Wall. ... ... „ 267
Byrsophyllum, *Hk. f.* ... ... iii. 107
ellipticum, *Hk. f.* ... ... „ 107
tetrandrum, *Hk. f.* ... ... „ 107
Bystropogon (*Bysteropogon*) *bipinnatus*, Roth ... ... iv. 631
graveolens, Bl. ... ... „ 630
Bythophyton, *Hk. f.* ... ... iv. 286
indicum, *Hk. f.* ... ... „ 286

CABOMBEÆ ... ... i. 113
Cacalia angulosa, Wall. ... iii. 334
angustifolia, Wall. ... ... „ 336
aurantiaca, Wall. ... ... „ 333
bicolor, Roxb. ... ... „ 335
bicolor, Wall. ... ... „ 334
bulbosa, Lour. ... ... „ 334
coccinea, Sims ... ... „ 336
crassissima, Wall. ... ... „ 338
Cusimbua, D. Don ... ... „ 334
cylindriflora, Wall. ... ... „ 335
Finlaysoniana, Wall. ... „ 335
flava, Ham. ... ... „ 333
fœtens, Wall. ... ... „ 333
glabra, Heyne ... ... „ 336
graciliflora, Wall. ... ... „ 338
grandiflora, Wall. ... ... „ 337
hastata, Linn. ... ... „ 353
hieracioides, Roxb. ... ... „ 335
incana, Heyne ... ... „ 333
Kleinia, Grah. ... ... „ 337
Kleinia, Hb. Madr. ... ... „ 337
laciniata, Wall. ... ... „ 334
mucronata, Heyne ... ... „ 336
pinnatifida, Pers. ... ... „ 334
purpurascens, Wall. ... „ 335
reclinata, Wall. ... ... „ 335
rotundifolia, Willd. ... ... „ 234
sagittaria, Heyne ... ... „ 334
sagittata, Vahl ... ... „ 336
sarmentosa, Lesch. ... ... „ 352
sonchifolia, Linn. ... ... „ 336
sonchifolia, Wall. ... ... „ 403
teres, Wall. ... ... „ 336
? *volubilis*, Bl. ... ... „ 351
volubilis, Ham. ... ... „ 352
sp., Burm. ... ... „ 238

Vol. Page
Cacoucia lucida, Hassk. ... ii. 454
  ? *trifoliata*, DC. ... ... ,, 454
CACTEÆ ... ... ii. 657
Cactus indicus, Roxb. ... ... ii. 657
Cadaba, *Forsk.* ... ... i. 172
  dubia, DC. ... ... ,, 173
  farinosa, *Forsk.* ... ... ,, 173
  heterotricha, *Stocks* ... ,, 173
  indica, *Lamk.* ... ... ,, 172
  trifoliata, *W. & A.* ... ... ,, 172
  triphylla, Wight ... ... ,, 172
Cadamba jasminiflora, Sonner. iii. 126
Cæsalpinia, *Linn.* ... ... ii. 254
  arborea, Miq. ... ... ,, 257
  armata, Grah. ... ... ,, 256
  ? *axillaris*, DC. ... ... ,, 258
  bijuga, Wall. ... ... ,, 255
  Bonduc, *Roxb.* ... ... ,, 255
  Bonducella, *Fleming* ... ,, 254
  cinclidocarpa, *Miq.* ... ... ,, 256
  Crista, Thunb. ... ... ,, 256
  cucullata, Roxb. ... ... ,, 258
  dasyrachis, Miq. ... ... ,, 257
  digyna, *Rottl.* ... ... ,, 256
  elata, Schwartz ... ... ,, 260
  enneaphylla, Roxb. ... ... ,, 258
  ferox, Hassk. ... ... ,, 256
  ferox, Hohen. ... ... ,, 261
  ferruginea, Miq. ... ... ,, 257
  Finlaysoniana, Grah. ... ,, 257
  flavicans, Grah. ... ... ,, 256
  furfuracea, Wall. ... ... ,, 258
  Glenieii, Thw. ... ... ,, 257
  gracilis, Miq. ... ... ,, 256
  grandis, Heyne ... ... ,, 258
  horrida, Wall. ... ... ,, 256
  hymenocarpa, Wall. ... ... ,, 259
  inermis, Roxb. ... ... ,, 257
  japonica, Sieb. & Zucc. ... ,, 256
  lacerans, Roxb. ... ... ,, 259
  microphylla, Ham. ... ... ,, 257
  mimosoides, *Lam.* ... ... ,, 256
  mimosoides, Heyne ... ... ,, 261
  Nuga, *Ait.* ... ... ,, 255
  oleosperma, Roxb. ... ... ,, 256
  paniculata, Roxb. ... ... ,, 255
  pulcherrima, *Sw.* ... ... ,, 255
  resupinata, Roxb. ... ... ,, 256
  Sappan, *Linn.* ... ... ,, 255
  scandens, Kœn. ... ... ,, 255
  sepiaria, *Roxb.* ... ... ,, 256
  sepiaria, Wall. ... ... ,, 258
  Simora, Ham. ... ... ,, 256
  sumatrana, Roxb. ... ... ,, 259
  sumatrana, Wall. ... ... ,, 255
  tortuosa, *Roxb.* ... ... ,, 257
  tortuosa, Wall. ... ... ,, 257

Vol. Page
CÆSALPINIEÆ ... ... ii. 60
Cæsulia, *Roxb.* ... ... iii. 291
  axillaris, *Roxb.* ... ... ,, 291
Caidbeja adherens, Forsk. ... v. 593
Cajanus, *DC.* ... ... ii. 217
  albicans, Grah. ... ... ,, 215
  bicolor, DC. ... ... ,, 217
  bicolor, Wall. ... ... ,, 217
  candicans, Wall. ... ... ,, 222
  flavus, DC. ... ... ,, 217
  glandulosus, Dalz. & Gibs. ,, 213
  goensis, Dalz. ... ... ,, 216
  indicus, *Spreng.* ... ... ,, 217
  kulnensis, Dalz. ... ... ,, 214
  lineatus, Grah. ... ... ,, 213
  nervosus, Royle ... ... ,, 216
  niveus, Grah. ... ... ,, 214
  scarabæoides, Thou. ... ... ,, 215
  suaveolens, Grah. ... ... ,, 222
  Wightianus, Grah. ... ... ,, 215
CAKILINEÆ ... ... i. 130
Calacanthus, *T. Anders.* ... iv. 477
  Dalzelliana, *T Anders.* ... ,, 478
Caladium acre, Br. ... ... vi. 523
  amboinense, Ham. ... ... ,, 533
  cucullatum, Pers. ... ... ,, 525
  discretum, Ham. ... ... ,, 519
  esculentum, Vent. ... ... ,, 523
  glycirrhizum, Fraser ... ,, 526
  heterophyllum, Presl ... ,, 527
  macrorrhizon, Br. ... ... ,, 526
  montanum, Heyne ... ... ,, 495
  nymphæifolium, Vent. ... ,, 523
  odoratissimum, C. Koch ,, 526
  odorum, Lindl. ... ... ,, 526
  ? *ovatum*, Ham. ... ... ,, 519
  ovatum, Vent. ... ... ,, 495
  pumilum, D. Don ... ... ,, 522
  viviparum, Lodd. ... ... ,, 522
Calamagrostis, *Adans.* ... vii. 260
  arundinacea, Roth ... ... ,, 266
  capillacea, Clarke ... ... ,, 268
  ciliata, Steud. ... ... ,, 264
  colorata, DC. ... ... ,, 221
  debilis, *Hk. f.* ... ... ,, 262
  decora, *Hk. f.* ... ... ,, 260
  emodensis, *Griseb.* ... ... ,, 261
  Epigejos, *Roth* ... ... ,, 260
  filiformis, Griseb. ... ... ,, 268
  georgica, C. Koch ... ... ,, 260
  glauca, Rchb. ... ... vii. 260, 261
  glomerata, Boiss. & Bühse vii. 260
  Griffithiana, *Hk. f.* ... ... ,, 263
  holciformis, J. & S. ... ... ,, 267
  Hookeriana, *Steud.* ... ... ,, 265
  Huebneriana, Rchb. ... ,, 260
  Jacquemontii, *Hk. f.* ... ,, 265

Calamagrostis Vol. Page
Lagurus, Koel.... ... ... vii. 106
lanceolata, Aitch. ... ... ,, 261
lanceolata, Stokes ... ... ,, 260
laxa, Host ... ... ,, 261
lithuanica, Schult. ... ... ,, 260
littorea, *DC.* ... ... ,, 261
Munroana, *Boiss.* ... ... ,, 263
nepalensis, Nees ... ... ,, 261
nepalensis, Str. & Wint. ... ,, 261
pilosula, *Hk. f.* ... ... ,, 263
pulchella, Hk. f. ... ... ,, 258
pyramidalis, Host ... ... ,, 266
rigens, Fries ... ... ,, 260
Royleana, *Steud.* ... ... ,, 265
Roylei, Steud. ... ... ,, 265
scabrescens, Griseb. ... ,, 267
Schmidii, *Hk. f.* ... ... ,, 264
Stolizkai, *Hk. f.* ... ... ,, 262
sylvatica, DC. ... ... ,, 266
tartarica, Jacquem. ... ,, 262
thyrsoides, C. Koch ... ,, 260
tripilifera, *Hk. f.* ... ... ,, 262
vilneensis, Schult. ... ... ,, 260
sp., Wall. ... ... ,, 261
Calaminea gigantea, Beauv. vii. 150
gigantea, R. & S. ... ... ,, 217
humilis, R. & S. ... ... ,, 150
Calamintha, *Moench* ... ... iv. 650
Clinopodium, *Benth.* ... ,, 650
longicaulis, *Benth.* ... ,, 651
nepalensis, Fisch. & Mey. ,, 651
repens, Benth. ... ... ,, 651
umbrosa, *Benth.* ... ... ,, 650
Calamosagus harinæfolius, Griff. ... ... vi. 475
laciniosus, Griff. ... ... ,, 475
ochriger, Griff. ... ... ,, 476
polystachyus, Griff. ... ... ,, 476
scaphigerus, Griff. ... ... ,, 475
wallichiæfolius, Griff. ... ,, 475
wallichiæfolius, Mart. ... ,, 475
Calamus, *Linn.* ... ... vi. 436
acanthospathus, Griff. ... ,, 448
amarus, Lour. ... ... ,, 447
andamanicus, *Kurz* ... ,, 457
angustifolius, Griff. ... ... ,, 464
arborescens, *Griff.* ... ... ,, 439
aureus, Reinw. ... ... ,, 460
axillaris, *Becc.* ... ... ,, 456
Brandisii, *Becc.* ... ... ,, 448
caesius, *Blume* ... ... ,, 456
calicarpus, Griff. ... ... ,, 467
castaneus, *Griff.* ... ... ,, 440
castaneus, Griff. ... ... ,, 440
collinus, Griff. ... ... vi. 439, 472
concinnus, *Mart.* ... ... vi. 444
conirostris, *Becc.* ... ... ,, 461

Calamus Vol. Page
delicatulus, *Thw.* ... ... vi. 446
densiflorus, *Becc.* ... ... ,, 445
Diepenhorstii, *Miq.* ... ,, 454
diffusus, *Becc.* ... ... ,, 447
digitatus, *Becc* ... ... ,, 442
Doriaei, *Becc.* ... ... ,, 456
Draco, Griff. ... ... ,, 467
erectus, *Roxb.* ... ... ,, 438
exilis, *Griff.* ... ... ,, 454
extensus, Mart. ... ... ,, 444
extensus, Roxb. ... ... ,, 462
fasciculatus, Roxb. ... ... ,, 444
Feanus, *Becc.* ... ... ,, 448
Fernandezii, H. Wendl. ... ,, 459
filipendulus, *Becc.* ... ... ,, 443
Flagellum, *Griff.* ... ... ,, 439
Flagellum, T. Anders. ... ,, 463
floribundus, *Griff.* ... ... ,, 444
Gamblei, *Becc.* ... ... ,, 453
geminiflorus, Griff. ... ... ,, 479
geniculatus, Griff. ... ... ,, 470
giganteus, *Becc.* ... ... ,, 460
glaucescens, Blume ... ... ,, 456
gracilis, *Roxb.* ... ... ,, 453
gracilis, Thw. ... ... ,, 442
grandis, Griff. ... ... ,, 463
grandis, Kurz ... ... ,, 463
Griffithianus, *Mart.* ... ,, 440
Guruba, *Ham.* ... ... ,, 449
Helferianus, *Kurz* ... ... ,, 446
Heliotropium, Ham. ... ... ,, 447
hostilis, Hort. Calc.... ... ,, 439
Huegelianus, *Mart.* ... ... ,, 452
humilis, Roxb. ... vi. 456, 462
hygrophilus, Griff. ... ... vi. 464
hypoleucus, *Kurz* ... ... ,, 451
Hystrix, Griff. ... ... ,, 469
inermis, T. Anders.... ... ,, 456
insignis, *Griff.* ... ... ,, 459
intermedius, Griff. ... ... ,, 464
javensis, *Bl.* ... ... vi. 442, 462
Jenkinsianus, Griff. ... vi. 439, 462
lævigatus, Mart. ... ... vi. 477
latifolius, *Roxb.* ... ... ,, 455
latifolius, Kurz... ... ... ,, 458
leptopus, Griff. ... ... ,, 468
leptospadix, *Griff.* ... ... ,, 441
Lewisianus, Griff. ... ... ,, 465
Lobbianus, *Becc.* ... ... ,, 462
longipes, Griff. ... ... ,, 471
longisetus, *Griff.* ... ... ,, 440
longisetus, Thw. ... ... ,, 441
luridus, *Becc.* ... ... ,, 445
macracanthus, T. Anders. ,, 456
macrocarpus, Griff. ... ... ,, 439
Martianus, *Becc.* ... ... ,, 459
Mastersianus, Griff. ... ... ,, 449

Calamus Vol. Page
maximus, Reinw. ... ... vi. 479
melanacanthus, *Mart.* ... „ 453
melanacanthus, Mart. ... „ 454
melanolepis, H. Wendl. ... „ 452
melanoloma, Mart. ... ... „ 456
Metzianus, Schlecht. ... „ 462
micracanthus, Griff. ... „ 467
micranthus, Blume ... ... „ 461
mishmiensis, Griff. ... ... „ 445
monoicus, Roxb. ... ... „ 448
montanus, Anders. ... ... „ 449
monticolus, Griff. ... ... „ 466
multiflorus, Mart. ... ... „ 445
myrianthus, *Becc.* ... ... „ 451
neglectus, *Becc.* ... ... „ 458
nicobaricus, *Becc.* ... ... „ 446
nitidus, *Mart.* ... ... „ 449
nutantiflorus, Griff. ... ... „ 463
ornatus, *Blume* ... ... „ 460
ornatus, Griff. ... ... „ 460
ovatus, Reinw. ... ... „ 460
ovoideus, *Thw.* ... ... „ 457
Oxleyanus, *Teys. & Binn.* „ 458
pachystemonus, *Thw.* ... „ 442
pallidulus, *Becc.* ... ... „ 457
palustris, *Griff.* ... ... „ 458
paniculatus, Mart. ... ... „ 459
paradoxus, Kurz ... ... „ 480
paspalanthus, *Becc.* ... „ 450
? *penicillatus*, Roxb. vi. 443, 462
perakensis, *Becc.* ... ... vi. 451
petiolaris, Griff. ... ... „ 466
platyspathus, *Mart.* ... „ 449
? *polygamus*, Roxb. ... vi. 439, 462
polyspathus, Wall. ... ... vi. 450
Pseudo-Rotang, Mart. ... „ 444
Pseudo-tenuis, *Becc.* ... „ 445
quinquenervius, *Roxb.* ... „ 460
radiatus, *Thw.* ... ... „ 442
radulosus, *Becc.* ... ... „ 443
ramosissimus, *Griff.* ... „ 450
Rheedei, *Griff.* ... ... „ 452
rivalis, *Thw.* ... ... vi. 441, 462
Rotang, *Linn.* ... ... vi. 447
Roxburghii, Griff. ... ... „ 448
Royleanus, Griff. ... ... „ 447
rudentum, Mart. ... ... „ 441
rudentum, Thw. ... ... „ 455
rugosus, *Becc.* ... ... „ 443
schizospathus, Griff. ... „ 439
scipionum, *Lour.* ... ... „ 461
scipionum, Lam. ... ... „ 448
simplex, *Becc.* ... ... „ 456
singaporensis, *Becc.* ... „ 454
spathulatus, *Becc.* ... ... „ 459
strictus, Miq. ... ... „ 471
tenuis, *Roxb.* ... ... „ 447

Calamus Vol. Page
tenuis, Thw. ... ... vi. 445
Thwaitesii, *Becc.* ... ... „ 441
tigrinus, Kurz ... ... „ 440
tomentosus, *Becc.* ... ... „ 455
travancoricus, *Bedd.* ... „ 452
triqueter, Becc. ... ... „ 480
unifarius, *H. Wendl.* ... „ 458
verticillaris, Griff. ... ... „ 470
viminalis, *Willd.* ... ... „ 444
viridispinus, *Becc.* ... ... „ 458
Wightii, Griff. ... ... „ 452
zeylanicus, *Becc.* ... ... „ 455
sp., Griff. ... ... „ 477
Calanthe, *Br.* ... ... v. 847
alismæfolia, *Lindl.* ... ... „ 849
alpina, *Hk. f.* ... ... „ 850
angusta, *Lindl.* ... ... „ 849
angustifolia, *Lindl.* v. 854, vi. 195
australis, Hort. ... ... vi. 195
biloba, *Lindl.* ... ... v. 848
brevicornu, *Lindl.* ... ... „ 848
carinata, Lindl. ... ... „ 856
chloroleuca, *Lindl.* ... ... „ 852
clavata, *Lindl.* ... ... „ 854
colorans, Rchb. f. ... ... vi. 195
comosa, Rchb. f. ... ... v. 851
curculigoides, *Wall.* ... „ 854
densiflora, *Lindl.* ... ... „ 855
diploxiphion, *Hk.f.* v. 849, vi. 195
elytroglossa, *Rchb. f.* ... v. 853
emarginata, Wight ... ... „ 851
Foerstermanni, *Rchb. f.* „ 854
fulgens, Lindl. ... ... „ 851
galeata, Lindl. ... ... „ 852
gigantea, *Hk. f.* ... ... „ 856
gracilis, *Lindl.* ... v. 855, vi. 195
grandiflora, Hort. Belg. ... vi. 195
Griffithii, *Lindl.* ... ... v. 852
herbacea, *Lindl.* ... ... „ 852
labrosa, *Rchb. f.* v. 856, vi. 195
longipes, *Hk.f.* ... ... vi. 195
Mannii, *Hk.f.* ... v. 850, vi. 195
Masuca, *Lindl.* ... ... v. 850
Masuca, Thw. ... ... „ 851
nutans, Linn. ... ... „ 856
occidentalis, Lindl. ... ... „ 848
odora, *Griff.* ... ... „ 853
pachystalix, *Rchb. f.* ... „ 850
Perrottetii, A. Rich. ... „ 851
Petri, Rchb. f. ... ... vi. 195
phajoides, Rchb. f. v. 854, vi. 195
plantaginea, *Lindl.* ... ... v. 853
plantaginea, Griff. ... ... „ 853
puberula, *Lindl.* ... ... „ 848
? *pulchra*, Lindl. ... ... „ 854
purpurea, *Lindl.* ... ... „ 851
rosea, *Benth.* ... ... „ 856

Calanthe ... Vol. Page
rubens, *Ridl.* ... vi. 195
rubro-oculata, Paxt. ... „ 195
Scortechinii, *Hk. f.* ... v. 854
sulphurea, Hort. Huegel „ 856
tricarinata, *Lindl.* v. 847, vi. 195
tricolor, Hort. Huegel ... v. 856
tubifera, *Hk. f.* ... v. 855, vi. 195
uncata, *Lindl.* ... v. 853
vaginata, *Lindl.* ... „ 849
veratrifolia, *Br.* v. 851, vi. 195
versicolor, Lindl. ... v. 851
vestita, *Lindl.* ... v. 852, vi. 195
viridi-fusca. Hook. ... v. 820
Wightii, Rchb. f. ... „ 851
Wrayi, *Hk. f.* ... v. 850, vi. 195
Calanthea, Griff. ... v. 853
Calathodes, *Hk. f. & T.* ... i. 22
palmata, *Hk. f. & T.* ... „ 22
Calcearia fornicata, Bl. ... vi. 118
picta, Bl. ... „ 118
Calceolaria mexicana, Benth. iv. 246
Calendula, *Linn.* ... iii. 357
arvensis, *Linn.* ... „ 358
officinalis, *Linn.* ... „ 358
CALENDULACEÆ ... iii. 224, 357
Caligula odontocera, Klotz. iii. 446
pulcherrima, Klotz. ... „ 446
Calimeris altaica, Nees ... iii. 251
canescens, Nees ... „ 251
flexuosa, Royle ... „ 252
integrifolia, Turcz ... „ 249
Calispermum scandens, Lour. iii. 513
Calistemon vide *Callistemma* iii. 249
Calla angustifolia, Jack ... vi. 533
aromatica, Roxb. ... „ 532
calyptrata, Roxb. ... „ 539
humilis, Jack ... „ 534
montana, Bl. ... „ 540
nitida, Jack ... „ 529
oblongifolia, Roxb. ... „ 529
occulta, Lodd. ... „ 532
ovata, Ham. ... „ 541
rubescens, Roxb. ... „ 532
virosa, Roxb. ... „ 524
Callæocarpus rhamnifolia, Miq. ... v. 624
sumatrana, Miq. ... „ 623
CALLEÆ ... vi. 491
Calliandra, *Benth.* ... ii. 302
cynometroides, Bedd. ... „ 306
Griffithii, *Benth.* ... „ 302
umbrosa, *Benth.* ... „ 302
Callianthemum, *C. A. Mey.* i. 14
cachemirianum, *Camb.* ... „ 14
Endlicheri, Walp ... „ 21
pimpinelloides, Hk. f. & T. „ 14
Callicarpa, *Linn.* ... iv. 566
Callicarpa ... Vol. Page
acuminata, *Roxb.* ... iv. 570
acuminatissima, Teijs. & Binn. ... „ 566
adenanthera, Br. ... „ 569
americana, Lour. ... „ 569
arborea, *Roxb.* ... „ 567
arborea, Miq. ... „ 567
arborea, Wall. ... „ 567
attenuata, Wall. ... „ 570
bicolor, Juss. ... „ 569
cana, *Linn.* ... „ 568
cana, Dalz. & Gibs ... „ 567
cana, Gamble ... „ 568
cana, Wall. ... iv. 569, 570
Cumingiana, Schau. ... iv. 566
cuspidata, Roxb. ... „ 569
dentata, Roth ... „ 569
dentata, Roxb. ... „ 569
dentata, Wall. ... „ 570
farinosa, Roxb. ... „ 567
hexandra, Teijs. & Binn. ... „ 566
Heynei, Roth ... „ 569
Hookeri, (nom. delend.) ... „ 568
incana, Roxb. ... „ 568
lanata, Linn. ... „ 567
lanata, Gamble ... „ 567
lanata, Griff. ... „ 568
lanata, Schau. ... „ 569
lanceolaria, Roxb. ... „ 570
lobata, *Clarke* ... „ 566
longifolia, *Lamk.* ... „ 570
longifolia, Benth. ... „ 570
longifolia, Hook. ... „ 570
macrophylla, *Vahl* ... „ 568
macrophylla, Rheede ... „ 568
nudiflora, Hook. & Arn. ... „ 568
pedunculata, *Br.* ... „ 569
pentandra, Roxb. ... „ 566
psilocalyx, *Clarke* ... „ 569
Reevesii, *Wall.* ... „ 568
Roxburghiana, R. & S. ... „ 570
Roxburghii, Wall. ... „ 568
rubella, *Lindl.* ... „ 569
sessilifolia, Wall. ... „ 569
sumatrana, Miq. ... „ 569
tectonæfolia, Wall. ... „ 567
tenuiflora, Champ. ... „ 569
tiliæfolia, Teijs. & Binn. „ 569
tomentosa, Lamk. ... „ 569
Tomex, Poir. ... „ 567
vestita, *Wall.* ... „ 567
villosa, Roxb. ... „ 567
villosa, Vahl ... „ 567
Wallichiana, Walp ... „ 567
sp., Hk. f. & T. ... iv. 567, 597
sp., Jones ... iv. 568
Calligonum, *Linn.* ... v. 22

Calligonum Vol. Page
polygonoides, *Linn.* ... v. 22
Callisia orientalis, Ham. ... vi. 380
Callistemma indicum, D. Don,
lapsu *Calistemon* ... ... iii. 249
Callistephus chinensis, Nees iii. 249
concolor, Dalz. ... ... ,, 299
Heyneanus, DC. ... ... ,, 299
Wightianus, DC. ... ... ,, 299
Callitriche, *Linn.* ... ... ii. 434
stagnalis, *Scop.* ... ... ,, 434
verna, *Linn.* ... ... ,, 434
Wightiana, Wall. ... ... ,, 434
Callostylis rigida, Bl. ... ... v. 802
Calocedrus macrolepis, Kurz v. 645
Calochlamys capitata, Presl iv. 603
Calonyction, Chois. ... ... iv. 197
asperum, Chois. ... ... ,, 198
comorenses, Bojer ... ... ,, 198
comospermum, Bojer ... ,, 198
comospermum, Thw. ... ,, 198
diversifolium, Hassk. ... ,, 198
grandiflorum, Chois. ... ,, 198
longiflorum, Hassk. ... ... ,, 198
muricatum, G. Don ... ... ,, 198
muticum, Dcne. ... ... ,, 198
pseudomuricatum, G. Don ,, 198
Roxburghii, G. Don ... ... ,, 197
speciosum, Chois. ... ... ,, 197
trichospermum, Chois. ... ,, 198
Calophanes, *D. Don* ... ... iv. 410
Dalzellii, *T. Anders.* ... ,, 411
depressa, T. Anders. ... ,, 410
littoralis, *T. Anders.* ... ,, 410
Nagchana, *Nees* ... ... ,, 410
rigida, Dalz. ... ... ,, 411
vagans, *Wight* ... ... ,, 411
CALOPHYLLEÆ ... ... i. 259
Calophyllum, *Linn.* ... ... i. 271
amœnum, Wall. ... ... ,, 272
angustifolium, *Roxb.* ... ,, 276
bancanum, Miq. ... ... ,, 272
Bintagor, Roxb. ... ... ,, 273
bracteatum, *Thw.* ... ... ,, 274
Burmanni, *Wight* ... ... ,, 272
canum, *Hk. f.* ... ... ,, 271
chinense, Walp. ... ... ,, 270
cordato-oblongum, *Thw.* ,, 275
cuneifolium, *Thw.* ... ... ,, 275
cymosum, Miq. ... . ,, 271
decipiens, Thw. ... ... ,, 275
decipiens, Wight ... ... ,, 274
elatum, Bedd. ... ... ,, 274
floribundum, *Hk. f.* ... ,, 272
gracile, Miq. ... ... ,, 271
Griffithii, *T. Anders.* ... ,, 273
inophyllum, *Linn.* ... ... ,, 273
longifolium, Wall. ... ... ,, 270

Calophylum Vol. Page
macrocarpum, *Hk. f.* ... iv. 273
? *marginatum*, Wall. ... ,, 276
mesuæfolium, Wall. ... ... ,, 272
microphyllum, *T. Anders.* ,, 272
Moonii, Wight ... ... ,, 271
pisiferum, Planch & Tr. ... ,, 272
plicipes, Miq. ... ... ,, 272
polyanthum, *Wall.* ... ... ,, 274
pulcherrimum, *Wall.* ... ,, 271
retusum, *Wall.* ... ... ,, 272
Soulattri, Burm. ... ... ,, 276
spectabile, *Willd.* ... ... ,, 271
spurium, Chois. ... ... ,, 274
Suriga, Ham. ... ... ,, 276
tetrapetalum, Roxb. ... ,, 271
tetrapetalum, Wall. ... ... ,, 273
Thwaitesii, *Planch. & Tr.* ,, 275
tomentosum, *Wight* ... ,, 274
trapezifolium, *Thw.* ... ,, 275
Walkeri, *Wight* ... ... ,, 275
Wallichianum, *Planch. & Tr.* ... ... ,, 273
Wightianum, *Wall.* ... ... ,, 274
Calorhabdos, *Benth.* ... ... iv. 291
Brunoniana, *Benth.* ... ... ,, 291
Calosacme acuminata, Wall. ... ... iv. 349, 359
amplectens, Wall. ... ... iv. 357
dimidiata, Wall. ... ... ,, 357
flava, Wall. ... ... ,, 357
grandiflora, Wall. ... ... ,, 358
macrophylla, Wall. ... ... ,, 358
polycarpa, Wall. ... ... ,, 344
Calosanthes indica, Bl. ... iv. 378
? *Caloscordon exsertum*, Herb. ... ... vi. 341
Calotheca, Spreng. ... ... vii. 333
arabica, Spreng. ... ... ,, 334
elegans, W. & A. ... ... ,, 301
niliaca, Spreng. ... ... ,, 334
repens, Spreng.... ... ... ,, 334
sabulosa, Steud. ... ... ,, 249
Calotropis, *Br.* ... ... iv. 17
Acia, *Ham.* ... ... ,, 18
gigantea, *Br.* ... ... ,, 17
Hamiltoni, Wall. ... ... ,, 18
herbacea, Wight ... ... ,, 18
heterophylla, Wall. ... ... ,, 18
procera, *Br.* ... ... ,, 18
Wallichii, Wight ... ... ,, 18
Calpicarpium Roxburghii, G. Don ... ... iii. 639
Calpurnia, *E. Mey.* ... ... ii. 251
aurea, *Baker* ... ... ,, 251
Caltha, *Linn.* ... ... i. 21
alba, Jacquem. ... ... ,, 21
Govaniana, Wall. ... ... ,, 21

Caltha Vol. Page
  himalensis, Don ... ... ii. 21
  palustris, *Linn.* ... ... „ 21
  paniculata, Wall. ... ... „ 21
  scaposa, *Hk. f. & T.* ... „ 21
Calycopteris, *Lamk.* ... ... ii. 449
  floribunda, *Lamk.* ... ... „ 449
  nutans, Kurz ... ... „ 449
Calyptranthes capitellata, Ham. ... ... ii. 499
  caryophyllata, Pers. ... „ 490
  cordifolia, Moon ... ii. 491, 493
  costata, Ham. ... ... ii. 498
  cuneata, Ham. ... ... „ 498
  Danca, Ham. ... ... „ 500
  grandis, Ham. ... ... „ 498
  Jambolana, Moon ... ... „ 493
  Jambolana, Willd. ... ... „ 499
  mangiferifolia, Hance ... „ 498
  obtusifolia, Ham. ... ... „ 481
  pyrifolia, Bl. ... ... „ 487
  Tatna, Ham. ... ... „ 498
  tenuis, Ham. ... ... „ 500
Calyptrocoryne Wightii, Schott ... ... vi. 513
Calyptrostylis, Nees ... ... vi. 670
  florida, Nees ... ... „ 670
Calysaccion longifolium, Wight ... ... i. 270
  siamense, Miq. ... ... „ 271
Calystegia, *R. Br.* ... ... iv. 217
  acetosæfolia, Turcz. ... ... „ 217
  hederacea, *Wall.* ... ... „ 217
  Keriana, Sweet ... ... „ 216
Calytriplex obovata, R. & P. iv. 272
Camarotis obtusa, Lindl. ... vi. 36
  pallida, Lindl. ... ... „ 36
  purpurea, Lindl. ... ... „ 36
  rostrata, Rchb. f. ... ... „ 36
Cambessedea, *sp.*, W. & A.... ii. 21
Cambogia venulosa, Blanco i. 260
Camelina Caisir, Wall. ... i. 145
CAMELINEÆ ... ... i. 129
Camellia, *Linn.* ... ... i. 292
  axillaris, Griff. ... ... „ 293
  axillaris, Roxb. ... ... „ 292
  axillaris, Wall. ... ... „ 282
  caudata, *Wall.* ... ... „ 293
  caudata, Griff. ... ... „ 293
  drupifera, *Lour.* ... ... „ 293
  japonica, Wall. ... ... „ 282
  Keina, D. Don ... ... „ 293
  Kissi, Wall. ... ... „ 293
  lutescens, *Dyer* .. ... „ 293
  Mastersii, Griff. ... ... „ 293
  oleifolia, Wall. ... ... „ 293
  Sasanqua, Thunb. ... ... „ 293
  ? *Scottiana*, Chois. ... ... „ 282
Camellia Vol. Page
  ? *Scottiana*, Wall. ... ... i. 292
  simplicifolia, Griff. ... ... „ 293
  symplocifolia, Griff.... ... „ 293
  theifera, *Griff.** ... ... „ 292
  sp., Griff. ... ... „ 292
  ? *sp.* ... ... „ 293
Cameraria zeylanica, Retz ... iii. 637
  zeylanica ?, Wight ... ... „ 656
Camirium cordifolium, Gærtn. ... ... v. 385
  sp., Rumph. ... ... „ 385
Campanula, *Linn.* ... ... iii. 438
  agrestis, Wall. ... ... „ 429
  Alphonsii, *Wall.* ... ... „ 440
  alsinoides, *Hk. f. & T.* ... „ 441
  argyrotricha, *Wall.* ... „ 441
  aristata, *Wall.* ... ... „ 441
  Benthamii, Wall. ... ... „ 439
  Brunonis, Wall. ... ... „ 439
  cana, *Wall.* ... ... „ 440
  cana, Hk. f. & T. ... ... „ 441
  canescens, *Wall.* ... ... „ 439
  caperonioides, Klotz. ... „ 439
  carnosa, Wall. ... ... „ 437
  cashmiriana, *Royle* ... ... „ 441
  colorata, *Wall.* ... ... „ 440
  dehiscens, Roxb. ... ... „ 429
  eriocarpa, Bieb. ... ... „ 439
  evolvulacea, Royle ... ... „ 441
  fulgens, *Wall.* ... ... „ 442
  himalayensis, Klotz. ... „ 440
  Hoffmeisteri, Klotz. ... „ 440
  integerrima, D. Don ... ... „ 439
  khasiana, *Hk. f. & T.* ... „ 439
  lancifolia, Roxb. ... ... „ 436
  latifolia, *Linn.* ... ... „ 439
  lavandulæfolia, Reinw. ... „ 429
  macrantha, Fisch. ... ... „ 439
  marginata, Thunb. ... ... „ 429
  modesta, *Hk. f. & T.* ... „ 442
  Moorcroftiana, Wall. ... „ 440
  nervosa, Royle ... ... „ 440
  pallida, Wall. ... ... „ 440
  paniculata, Wall. ... ... „ 428
  ? *peduncularis*, Wall. ... „ 430
  purpurea, Spreng. ... ... „ 432
  ramulosa, Wall.... ... ... „ 440
  stricta, Wall. ... ... „ 439
  sylvatica, *Wall.* ... ... „ 439
  thalictrifolia, Spreng. ... „ 432
  Thomsoni, Hk. f. & T. ... „ 438
  viridis, Spreng. ... ... „ 431
CAMPANULACEÆ ... ... iii. 421
CAMPANULEÆ ... ... iii. 422

---

* C. Thea, *Link, Enum. Hort. Berol*, ii. 73, is the earliest name.

Vol. Page
Campanumœa, *Bl.* ... ... iii. 435
celebica, *Bl.* ... ... „ 436
cordata, Maxim. ... ... „ 435
inflata, *Clarke* ... ... „ 436
javanica, *Bl.* ... ... „ 435
javanica, Hk. f. ... ... „ 435
parviflora, *Benth.* ... ... „ 436
truncata, Endl.... ... ... „ 436
Campbellia albida, Benth. ... iv. 323
? *aurantiaca*, Wight ... „ 323
cytinoides, Wight ... ... „ 323
Lawii, Benth. ... ... „ 322
subacaulis, Benth. ... ... „ 321
Campelepis viminea, Falc. ... iv. 12
Campelia glabrata, Hassk. vi. 384
marginata, Bl. ... ... „ 383
marginata, Wall. ... ... „ 384
mollissima, Bl.... ... ... „ 383
Camphora caniflora, Meissn. v. 135
chinensis, Nees... ... ... „ 135
glandulifera, Nees ... ... „ 135
inuncta, Nees ... ... „ 135
Parthenoxylon, Nees ... „ 135
Pseudo-sassafras, Miq. ... „ 135
CAMPHOROSMEÆ ... ... v. 1
Campnosperma, *Thw.*... ... ii. 40
auriculata, *Hk. f.* ... ... „ 41
Griffithii, *Marchand* ... „ 41
macrophylla, *Hk. f.*... ... „ 41
zeylanica, *Thw.* ... ... „ 41
Campuleia coccinea, Hook. iv. 299
Campylandra aurantiaca, Baker ... ... vi. 325
Wattii, Baker ... ... „ 325
Campylanthus, *Roth* ... ... iv. 289
ramosissimus, *Wight* ... „ 290
Campylotropis, Bunge... ... ii. 143
Camunium bengalense, Ham. i. 556
chinense, Roxb. ... ... „ 554
sinense, Rumph. ... ... „ 554
Cananga, *Rumph.* ... ... i. 56
? monosperma, *Hk. f. & T.* „ 57
odorata, *Hk. f. & T.* ... „ 56
virgata, *Hk. f. & T.* ... „ 57
Canarium, *Linn.* ... ... i. 531
balsamiferum, Moon ... „ 532
bengalense, *Roxb.* ... ... „ 534
brunneum, *Bedd.* ... ... „ 531
coccineo-bracteatum, *Kurz* „ 536
commune, *Linn.* ... i. 531, 685
euphyllum, *Kurz* ... ... i. 535
grandiflorum, *A. W. Benn.* „ 533
hirtellum, *A. W. Benn.* ... „ 534
Kadondon, *A. W. Benn.* ... „ 535
lævigatum, Miq. ... ... „ 538
laxum, *A. W. Benn.* ... „ 535
nitidum, *A. W. Benn.* ... „ 533
Canarium Vol. Page
parvifolium, *A. W. Benn.* i. 536
pilosum, *A. W. Benn.* ... „ 533
purpurascens, *A. W. Benn.* „ 532
rubiginosum, *A. W. Benn.* „ 535
rufum, *A. W. Benn.* ... „ 533
Sajiga, Ham. ... ... „ 699
secundum, *A. W. Benn.* ... „ 532
strictum, *Roxb.* ... ... „ 534
zeylanicum, *Bl.* ... ... „ 532
sp., Wall ... ... „ 532
Canavalia, *DC.* ... ... ii. 195
dolichoides, Kurz ... ... „ 207
ensiformis, *DC.* ... ... „ 195
gladiata, DC. ... ... „ 195
grandis, Kurz ... ... „ 204
incurva, DC. ... ... „ 196
lineata, DC. ... ... „ 196
Loureirii, G. Don ... ... „ 196
lucens, Kurz ... ... „ 207
mollis, Wall. ... ... „ 196
obtusifolia, *DC.* ... ... „ 196
rosea, DC. ... ... „ 196
rutilans, DC. ... ... „ 196
Stocksii, Dalz. & Gibs. ... „ 196
turgida, Grah. ... ... „ 196
virosa, W. & A.... ... ... „ 196
Candarum Roxburghii, Schott vi. 513
Cankrienia chrysantha, De Vriese ... ... iii. 489
Canna, *Linn.* ... ... vi. 260
chinensis, Willd. ... ... „ 260
exigua, Bouché ... ... „ 261
flavescens, Link ... ... „ 261
indica, *Linn.* ... ... „ 260
indica, Linn. ... ... „ 260
nepalensis, Wall. ... ... „ 261
speciosa, Rosc. ... ... „ 261
CANNABINEÆ... ... ... v. 478
Cannabis, *Tournef.* ... ... v. 487
indica, Lamk. ... ... „ 487
sativa, *Linn.* ... ... „ 487
CANNEÆ ... ... vi. 200
Canscora, *Lamk.* ... ... iv. 102
alata, Wall. ... ... „ 104
andrographioides, *Griff.* „ 105
concanensis, *Clarke* ... „ 104
decurrens, *Dalz.* ... ... „ 103
decussata, *R. & S.* ... ... „ 104
diffusa, *Br.* ... ... „ 103
diffusa, ? Wall. ... ... „ 105
divaricata, Miq. ... ... „ 103
foliosa, G. Don ... ... „ 103
grandiflora, Wight ... ... „ 104
Helferiana, *Wall.* ... ... „ 106
lancifolia, Miq. ... ... „ 103
Lawi, Clarke ... ... „ 103
Lawi, Wight ... ... „ 103

Canscora — Vol. Page
macrocalyx, Miq. ... ... iv. 104
Parishii, *Hk. f.* ... ... „ 105
pauciflora, *Dalz.* ... ... „ 103
perfoliata, *Lamk.* ... ... „ 104
perfoliata, Wall. ... ... „ 105
pusilla, R. & S. ... ... „ 100
Schultesii, *Wall.* ... ... „ 105
sessiliflora, *R. & S.* ... ... „ 104
tenella, Wight ... ... „ 103
Wallichii, *Clarke* ... ... „ 105
sp., Wall. ... ... „ 105
Cansjera, *Juss.* ... ... i. 582
malabarica, Lamk. ... ... „ 582
martabanica, Wall. ... ... „ 582
parvifolia, *Kurz* ... ... „ 583
Rheedii, *Gmelin* ... ... „ 582
scandens, Roxb. ... ... „ 582
zizyphifolia, Griff. ... ... „ 582
Cantharospermum albicans, W. & A. ... ... ii. 215
? *distans*, Royle ... ... „ 216
nervosum, Royle ... ... „ 216
pauciflorum, W. & A. ... „ 215
Canthium, *Lam.* ... ... iii. 131
angulosum, Wall. ... ... „ 111
angustifolium, *Roxb.* ... „ 135
campanulatum, *Thw.* ... „ 135
confertum, *Korth.* ... ... „ 133
corymbosum, Pers. ... ... „ 102
didymum, *Roxb.* ... ... „ 132
didymum, Bedd. ... ... „ 132
ficiforme, *Hk. f.* ... ... „ 133
glabrum, *Bl.* ... ... „ 133
glomeratum, Miq. ... ... ii. 565
glomerulatum, Miq. ... ... iii. 133
gracilipes, *Kurz* ... ... „ 134
horridum, *Bl.* ... ... „ 135
lanceolatum, Arn. ... ... „ 132
Leschenaultii, W. & A. ... „ 135
lucidum, Schlecht. ... ... „ 132
macrocarpum, *Thw.* ... „ 135
montanum, *Thw.* ... ... „ 132
neilgherrense, *Wight* ... „ 133
parviflorum, *Lamk.* ... ... „ 136
parviflorum, Schl. ... ... „ 111
parvifolium, *Roxb.* ... ... „ 135
puberulum, *Thw.* ... ... „ 134
recurvum, Wall. ... ... „ 111
Rheedii, *DC.* ... ... „ 134
scandens, Bl. ... ... „ 135
thyrsoideum, Roem. ... ... „ 40
travancoricum, *Bedd.* ... „ 134
umbellatum, *Wight* ... ... „ 132
zizyphinum, Wall. ... ... „ 135
sp., Wall. ... ... „ 136
Capellia, Bl. ... ... i. 35
CAPPAREÆ ... ... i. 168

CAPPARIDEÆ ... ... i. 167
Capparis, *Linn.* ... ... i. 173
acuminata, *Willd.* ... ... „ 178
acuminata, Roxb. ... ... „ 174
accuminata, Willd. ... ... „ 178
ægyptiaca, Lamk. ... ... „ 173
apetala, Roth ... ... „ 171
aphylla, *Roth* ... ... „ 174
assamica, *Hk. f. & T.* ... „ 177
bisperma, Roxb. ... ... „ 176
bisperma, Wight ... ... „ 176
brevispina, DC. ... ... „ 174
cærulea, Heyne ... ... „ 175
callosa, Bl.... ... ... „ 179
conspicua, Wall. ... ... „ 179
corymbosa, Roxb. ... ... „ 176
divaricata, *Lamk.* ... ... „ 174
divaricata, Wall. ... ... „ 175
diversifolia, *W. & A.* ... „ 175
erythrodasys, Miq. ... ... „ 178
Finlaysoniana, *Wall.* ... „ 179
Finlaysonina, Wall.... ... „ 179
flavicans, *Wall.* ... ... „ 179
floribunda, *Wight* ... ... „ 177
formosa, Dalz. ... ... „ 174
formosa, Wall. ... ... „ 178
galeata, Fres. ... ... „ 173
glauca, *Wall.* ... ... „ 180
grandiflora, *Wall.* ... ... „ 174
grandis, *Linn.* ... ... „ 176
herbacea, Willd. ... ... „ 173
heteroclita, Roxb. ... ... „ 171
Heyneana, *Wall.* ... ... „ 174
horrida, *Linn. f.* ... ... „ 178
incanescens, DC. ... ... „ 177
leucophylla, DC. ... ... „ 173
linifolia, Roxb. ... ... „ 171
longispina, *Hk. f. & T.* ... „ 176
malabarica, Wall. ... ... „ 177
maximus, Roth ... ... „ 176
micracantha, *DC.* ... ... „ 179
molliuscula, Wall. ... ... „ 180
Moonii, *Wight* ... ... „ 175
multiflora, *Hk. f. & T.* ... „ 178
Murrayana, Grah. ... ... „ 173
nepalensis, Wall. ... ... „ 173
obovata, Ham. ... ... „ 176
obovata, Royle ... ... „ 173
olacifolia, *Hk. f. & T.* ... „ 178
oligandra, Griff. ... ... „ 177
orbiculata, *Wall.* ... ... „ 176
oxyphylla, Wall. ... ... „ 179
parviflora, *Hk. f. & T.* ... „ 176
pedunculosa, *Wall.* ... ... „ 176
pumila, *Champ.* ... ... „ 177
punctata, Wall. ... ... „ 177
pyrifolia, W. & A. ... ... „ 174

Capparis Vol. Page
quadriflora, DC. ... ... i. 178
racemifera, DC. ... ... „ 176
reticulata, Klein ... ... „ 175
retusella, Thw. ... ... „ 177
Rheedii, Rottb. ... ... „ 174
rotundifolia, Rottb. ... ... „ 174
Roxburghii, *DC.* ... .. , 175
rupestris, Sibth. ... ... „ 173
sabiæfolia, *Hk. f. & T.* ... „ 179
salaccensis, Bl. ... ... „ 175
sepiaria, *Linn.* ... ... „ 177
sepiaria, Wall. ... ... „ 176
Sodada, Br. ... ... „ 175
spinosa, *Lamk.* ... ... „ 173
stylosa, DC. ... ... „ 174
tener, *Dalz.* ... ... „ 179
terniflora (*tenuiflora*), DC. „ 178
tetrasperma, Thw. ... ... , 179
trifoliata, Roxb. ... ... „ 172
trinervia, *Hk. f. & T.* ... „ 175
uncinata, Wall. ... ... „ 179
variabilis, Wall. ... ... „ 180
versicolor, *Griff.* ... ... „ 175
viminea, *Hk. f. & T.* ... „ 179
Wallichiana, W. & A. ... „ 174
zeylanica, *Linn.* ... ... „ 174
zeylanica, DC. ... ... „ 174
zeylanica, Roxb. ... ... „ 178
zeylanica, W. & A. ... ... „ 178
sp., Griff. ... ... „ 178
Capraria crustacea, Linn. ... iv. 279
diffusa, Roxb. ... ... iv. 267, 397
dissecta, Del. ... ... iv. 258
gratissima, Roxb. ... ... „ 266
rigida, Ham. ... ... „ 301
Caprifoliaceæ ... ... iii. 1
Caprifolium japonicum, D. Don... ... ... iii. 10
macranthum, D. Don ... „ 10
Capsella, *Mœnch* ... ... i. 159
Bursa-pastoris, *Mœnch.* ... „ 159
elliptica, *C. A. Mey.* ... „ 159
procumbens, Boiss. ... ... „ 159
Thomsonii, *Hk. f.* ... ... „ 159
Capsicum, *Linn.* ... ... iv. 238
baccatum, Wall. ... ... „ 239
cerasiforme, Lamk. ... ... „ 239
Chamæcerasus, Nees ... „ 239
fastigiatum, Bl. ... ... „ 239
frutescens, *Linn.* ... ... „ 239
grossum, *Willd.* ... ... „ 239
minimum, *Roxb.* ... ... „ 239
Caragana, *Lam.* ... ... ii. 115
brevispina, *Royle* ... ... „ 116
conferta, *Benth.* ... ... „ 116
crassicaulis, *Benth.* ... ... „ 117
cuneata, *Baker* ... ... „ 117

Caragana Vol. Page
Gerardiana, *Royle* ... ... ii. 116
Moorcroftiana, Benth. ... „ 249
nubigena, Bunge ... ... „ 117
polyacantha, *Royle* ... ... „ 116
pygmæa, *DC.* ... ... „ 116
spinosissima, Benth. ... „ 116
versicolor, Benth. ... ... „ 116
Carallia, *Roxb.* ... ... ii. 439
calycina, *Thw.* ... ... „ 439
ceylanica, Arn. ... ... „ 439
confinis, Bl. ... ... „ 439
corymbosa, Arn. ... ... „ 439
integerrima, *DC.* ... ... „ 439
lanceæfolia, *Roxb.* ... ... „ 439
lanceolaria, Wall. ... ... „ 439
lucida, Kurz ... ... „ 439
lucida, Roxb. ... ... „ 439
octopetala, F. Muell. ... „ 439
sinensis, Arn. ... ... „ 439
Symmetria, Bl. ... ... „ 439
timorensis, Bl. ... ... „ 439
Caralluma, *Br.* ... ... iv. 76
adscendens, *Br.* ... ... „ 76
attenuata, *Wight* ... ... „ 76
crenulata, Wall. ... ... „ 78
edulis, *Benth.* ... ... „ 76
fimbriata, *Wall.* ... ... „ 77
Caranga amara, Vahl ... ... iv. 275
Carapa, *Aubl.* ... ... i. 566
carnosula, Zoll. ... ... „ 562
indica, Juss. ... ... „ 567
moluccensis, *Lamk.* ... ... „ 567
obovata, Bl. ... ... „ 567
Cardamine, *Linn.* ... ... i. 137
africana, *Linn.* ... ... „ 137
anteniquana, DC. ... ... „ 137
borbonica, Pers. ... ... „ 137
circæoides, *Hk. f. & T.* ... „ 137
debilis, D. Don ... ... „ 138
elegantula, *Hk. f. & T.* ... „ 139
foliosa, Wall. ... ... „ 139
Griffithii, *Hk. f. & T.* ... „ 139
hirsuta, *Linn.* ... ... „ 138
hirsuta, Hk. f. & T. ... ... „ 138
impatiens, *Linn.* ... ... „ 138
macrophylla, *Willd.* ... „ 139
macrophylla, Ledeb. ... „ 139
nilagirica, Schlecht. ... „ 138
pectinata, DC. ... ... „ 138
polyphylla, D. Don ... ... „ 139
pratensis, *Linn.* ... ... „ 138
subumbellata, *Hook.* ... „ 138
sylvatica, Link ... ... „ 138
trifoliolata, *Hk. f. & T.* ... „ 138
violacea, *Wall.* ... ... „ 137
Wightiana, Wall. ... ... „ 137
Cardamomum medium, Schlt. vi. 235

Cardamomum Vol. Page
officinale, Salisb. ... ... vi. 251
Cardanthera, *Ham.* ... ... iv. 403
avana, *Benth.* ... ... „ 405
balsamica, *Benth.* ... ... „ 404
Griffithii, *Benth.* ... ... „ 404
pinnatifida, *Benth.* ... ... „ 405
Thwaitesii, *Benth.* ... ... „ 405
triflora, *Ham.* ... ... „ 405
uliginosa, *Ham.* ... ... „ 403
verticillata, *Benth.* ... ... „ 404
Cardiolophus decussata, Griff. iv. 272
Cardiopteris, *Wall.* ... ... i. 597
javanica, Bl. ... ... „ 597
lobata, *Br.* ... ... „ 597
moluccana, Bl. ... ... „ 597
Rumphii, Baill. ... ... „ 597
subhamata, Wall. ... ... „ 598
Cardiospermum, *Linn.* ... i. 669
canescens, *Wall.* ... ... „ 670
Halicacabum, *Linn.* ... ... „ 670
microcarpum, H. B. K. ... „ 670
? *ovatum*, Wall. ... ... „ 670
pubescens, Griff. ... ... „ 670
Schmiedelia, Dalz. & Gibs. „ 670
villosa, Dalz. & Gibs. ... „ 670
Cardiostegia Kotschyi, Presl i. 373
Carduncellus lanatus, Rchb. iii. 386
Carduus, *Linn.* ... ... iii. 361
acanthoides, Sm. ... ... „ 361
acanthoides-nutans ... ... „ 361
argyracanthus, Wall. ... „ 363
auriculatus, Wall. ... ... „ 374
crispus, Linn. ... ... „ 361
elongatus, Wall. ... ... „ 380
heteromallus, D. Don ... „ 373
lanatus, Roxb. ... ... „ 362
lucidus, Wall. ... ... „ 361
Marianus, Linn. ... ... „ 364
nutans, *Linn.* ... ... „ 361
obvallatus, Wall. ... ... „ 365
ramosus, Roxb. ... ... „ 383
radicans, Roxb. ... ... „ 381
tectus, Wall. ... ... „ 365
Thomsoni, *Hk. f.* ... ... „ 361
trichocephalus, Wall. ... „ 380
sp., Clarke ... ... „ 361
Carex, *Linn.* ... ... vi. 699
acicularis, Boeck. ... ... „ 748
acuta, Linn. ... ... „ 741
acutiformis, *Ehrh.* ... ... „ 740
æquata, Nees ... ... „ 723
Aitchisoni, Boeck. ... ... „ 748
alopecuroides, D. Don ... „ 737
alpestris, Allioni ... ... „ 745
alpina, *Sw.* ... ... „ 730
alpina, Boeck. ... ... „ 748
alta, *Boott* ... ... „ 707

Carex Vol. Page
amæna, Boott ... ... vi. 719
ampullacea, Good. ... ... „ 740
angustifolia, Boott ... ... „ 747
aphanolepsis, Fran. & Sav. „ 737
Archeri, Boeck. ... ... „ 748
arctica, Deinb. ... ... „ 701
Arnottiana, *Nees* ... ... „ 709
Arnottiana, Boott ... ... „ 741
arridens, *Clarke* ... ... „ 726
asperula, Nees ... ... „ 732
aterrima, Hoppe ... ... „ 731
atrata, *Linn.* ... ... „ 731
atrata, Boott ... ... „ 733
atrofusca, Schk. ... ... „ 734
austriaca, Schk. ... ... „ 701
axillaris, Linn. ... ... „ 706
baccans, *Nees* ... ... „ 722
baccans, Boott ... ... „ 723
bengalensis, Boeck. ... ... „ 716
bengalensis, Boott ... ... „ 716
bengalensis, Roxb. ... vi. 715, 718
bengalensis, Thw. ... ... vi. 715
Benthamiana, Boott ... „ 709
Bertolonii, Schk. ... ... „ 701
bicolor, Boeck. ... ... „ 748
breviculmis, *Br.* ... ... „ 746
breviculmis, Thw. ... ... „ 747
breviscapa, *Clarke* ... ... „ 736
Brizopyrum, Kunze ... ... „ 707
Bruceana, Boott ... vi. 715, 717
brunnea, *Thunb.* ... ... vi. 705
cæspititia, *Nees* ... ... „ 710
cæspitosa, Schk. ... ... „ 711
canaliculata, Boott ... ... „ 715
canescens, *Linn.* ... ... „ 706
capillacea, *Boott* ... ... „ 713
capillacea, Benth. ... ... „ 713
capitulata, Boott ... ... „ 721
cardiolepis, *Nees* ... ... „ 744
caucasica, Stev. ... ... „ 731
celsa, Boott ... ... „ 732
cernua, *Boott* ... ... „ 708
ceylanica, *Boeck.* ... ... „ 719
chinensis, Munro ... ... „ 738
chlorostachys, D. Don ... „ 737
cinnamomea, Boott ... ... „ 732
coacta, Boott ... ... „ 701
composita, *Boott* ... ... „ 724
concolor, Nees ... ... „ 729
condensata, *Nees* ... ... „ 716
condensata, Boott vi. 715, 716, 717
confertiflora, Boott ... ... vi. 741
continua, *Clarke* ... ... „ 717
cooptanda, *Clarke* ... ... „ 707
coriophora, Fisch. ... ... „ 734
courtallensis, Nees ... ... „ 729
crassipes, Boeck. ... ... „ 726

Carex Vol Page
cruciata, *Wahl* ... vi. 715
cruciata, Nees ... „ 718
cruciata, Thw. ... vi. 718, 719, 721
cruenta, *Nees* ... vi. 734
Cumingiana, Steud. ... „ 721
curaica, *Kunth* ... „ 702
curaica, Boiss. ... „ 701
curaica, Turcz ... „ 702
curta, Good. ... „ 706
curticeps, *Clarke* ... „ 729
curvata, *Boott* ... „ 728
curvirostris, Kunze ... „ 722
cylocistis, Boeck. ... „ 748
cyrtostachys, *Brong.* ... „ 714
Daltoni, *Boott* ... „ 726
decora, *Boott* ... „ 725
Deinbolliana, J. Gay ... „ 701
desponsa, *Boott* ... „ 724
diffusa, Boott ... „ 717
diluta, *M. Bieb.* ... „ 737
dimorpha, Boeck. ... „ 748
dioica, Linn. ... „ 699
disticha, Huds. ... „ 704
distracta, *Clarke* ... „ 715
divaricata, Wall. ... vi. 715, 726
diversiflora, Host ... vi. 745
divisa, *Huds.* ... vi. 701, 702
divisa, Boott ... vi. 702
divulsa, Good. ... „ 703
dolicophylla, Link ... „ 722
Doniana, Drejer ... „ 737
Doniana, Spreng. ... „ 737
duriuscula, C. A. Meyer ... „ 701
Duthiei, *Clarke* ... „ 731
ecostata, *Clarke* ... „ 720
elynoides, J. Gay ... „ 712
eminens, Nees ... „ 723
emodorum, Spreng. ... „ 737
erostrata, *Boott* ... „ 711
Esenbeckii, Boott ... vi. 695, 712
Esenbeckii, Kunth ... vi. 696
excurva, Boott ... „ 746
exigua, Boeck. ... „ 748
fallax, Steud. ... „ 702
Fedia, Nees ... „ 747
ferruginea, *Scop.* ... „ 738
filicina, *Nees* ... „ 717
filicina, Boeck. ... „ 717
finitima, *Boott* ... „ 736
fissilis, Boott ... vi. 714, 715
flacca, *Schr.* ... vi. 742
flava, *Linn.* ... „ 739
flexilis, D. Don ... „ 705
floribunda, Boeck. ... „ 723
fluviatilis, *Boott* ... „ 703
fœtida, Allioni ... „ 702
foliosa, D. Don ... „ 703

Carex Vol. Page
fragilis, *Boott* ... vi. 728
frigida, Boeck. ... „ 748
frigida, Wall. ... „ 734
fucata, *Boott* ... „ 710
fuliginosa, Boeck. ... „ 748
fuliginosa, Schk. ... „ 735
fuscifructus, *Clarke* ... „ 742
fusiformis, *Nees* ... „ 736
Gardneri, Boott ... „ 722
Gebleri, Presc. ... „ 739
glauca, Scop. ... „ 742
glaucina, Boeck. ... „ 719
glomerata, Host ... „ 701
glomerata, Schk. ... „ 734
gracilenta, Boott ... „ 730
gracilis, Boott ... „ 747
gracilis, Br. ... „ 705
Griffithii, Boott ... „ 732
gynobasis, Vill. ... „ 745
hæmatostoma, *Nees* ... „ 744
hæmatostoma, Jacq. ... „ 731
Halleriana, *Asso* ... „ 745
hebecarpa, *C. A. Mey.* vi. 747, 748
Helferi, *Boeck.* ... vi. 714
Henningsiana, Boeck. ... „ 702
heterolepis, Boeck. ... „ 748
heterolepis, Boott ... „ 710
heterolepis, Bunge ... „ 710
hirta, Boiss. ... „ 747
hirta, Linn. ... „ 747
hirtella, *Drejer* ... „ 744
hirtella, Boott ... „ 743
Hostii, Schk. ... „ 701
hymenolepis, Nees ... „ 743
impunctata, Boeck. ... „ 698
inæqualis, *Boott* ... „ 726
inanis, *Kunth* ... „ 743
inclinis, *Boott* ... „ 728
incurva, *Lightf.* ... „ 700
incurva, Boeck. ... „ 748
indica, Linn. ... „ 714
indica, Boeck. ... „ 715
indica, Munro ... „ 715
indica, Nees ... vi. 716, 720
infuscata, Nees ... vi. 730, 731
infuscata, Wight ... vi. 730
insignis, *Boott* ... „ 725
instabilis, Boott ... „ 735
Jackiana, *Boott* ... „ 735
Jackiana, Thw. ... „ 735
japonica, *Thunb.* ... „ 736
japonica, Boott ... „ 737
juncifolia, Allioni ... „ 700
juncifolia, Schk. ... „ 701
kashmirensis, *Clarke* ... „ 743
Kirilowii, Turcz ... „ 745
Kochiana, DC. ... „ 741

Carex — Vol. Page
Kunthii, Drejer ... ... vi. 747
lachnosperma, *Nees* ... ... „ 747
lachnosperma, Wall. ... ... „ 747
læta, *Boott* ... ... „ 745
lævicaulis, Kunze ... ... „ 737
Langsdorfii, Boott ... ... „ 746
Lehmanni, *Drejer* ... ... „ 730
Lehmanni, Boeck. ... ... „ 748
Lehmanni, Boott ... ... „ 730
leiocarpa, Boeck. ... ... „ 748
leiorhyncha, C. A. Mey. ... „ 702
lenta, D. Don ... ... „ 705
lenticularis, D. Don ... „ 708
lepidocarpa, Tausch. ... „ 739
leptocarpa, *Clarke* ... ... „ 719
leucantha, *Arn.* ... ... „ 721
leucochlora, Bunge ... ... „ 746
ligulata, *Nees* ... ... „ 747
Lindleyana, *Nees* ... ... „ 721
Lindleyana, Hk. f. & T. ... „ 719
linearis, *Boott* ... ... „ 712
linearis, Boeck. ... ... „ 748
linearis, Boott ... ... „ 696
lobulirostris, *Drejer* ... „ 741
longepedicellata, Boeck. ... „ 748
longiaristata, Boott ... ... „ 714
longicruris, *Nees* ... ... „ 705
longicuspis, Boeck. ... ... „ 748
longipes, *D. Don* .. ... „ 704
longipes, Thw. ... ... „ 706
lurida, *Clarke* ... ... „ 742
macrantha, Boeck. ... ... „ 748
macrogyna, Boott ... ... „ 744
macrogyna, Turcz ... ... „ 739
macrolepis, D. Don ... ... „ 704
macrophylla, Hochst. ... „ 723
macrorrhyncha, Kar. & Kir. „ 712
maculata, *Boott* ... ... „ 735
magellanica, Boeck. ... „ 748
malaccensis, *Clarke* ... „ 722
Maubertiana, Boott ... ... „ 747
meiogyna, Nees ... vi. 718, 720
melanantha, *C. A. Mey.* ... vi. 733
melanocephala, Turcz ... „ 733
melanolepis, Boeck. ... ... „ 748
mercarensis, *Hochst.* ... „ 719
micans, Boott ... ... „ 735
microglochin, *Wahl.* ... „ 711
microlepis, Boeck. ... ... „ 748
Mielichhoferi, Schk. ... „ 738
Milnei, Boott... ... ... „ 715
minutiflora, Boeck. ... ... „ 748
mitis, Boeck. ... ... „ 704
Moorcroftii, *Falc.* ... ... „ 733
Moritzii, Steud. ... ... „ 714
Motoskei, Miq. ... ... „ 737
munda, *Boott* ... ... „ 727

Carex — Vol. Page
munipoorensis, *Clarke* ... vi. 729
Munroi, *Boott* ... ... „ 738
muricata, *Linn.* ... ... „ 703
mutans, Boott ... ... „ 695
Myosurus, *Nees* ... ... „ 723
Myosurus, Boott ... ... „ 724
Myosurus, Duthie ... ... „ 723
Myosurus, Nees ... ... „ 723
nana, Boott ... ... „ 713
Neesiana, Arn. ... ... „ 742
nemostachys, *Steud.* ... „ 746
nepalensis, Clarke ... ... „ 705
nepalensis, Spreng. ... ... „ 704
nigra, Siev. ... ... „ 733
nilagirica, Hochst. ... ... „ 718
nivalis, *Boott* ... ... „ 732
nivalis, Boeck. ... ... „ 733
nobilis, Boott ... ... „ 724
notha, *Kunth* ... ... „ 709
Notoleia, Nees ... ... „ 703
nubigena, *D. Don* ... ... „ 702
nutans, Boeck. ... ... „ 739
nutans, Host ... ... „ 739
obesa, Allioni ... ... „ 734
obscura, *Nees* ... ... vi. 731, 733
obscura, Boeck. ... ... vi. 731
obscura, Munro & Boott „ 731
obscura, Royle ... ... „ 731
Œderi, Willd. ... ... „ 739
oligocarya, *Clarke* ... ... „ 746
olivacea, *Boott* ... ... „ 741
Oliveri, Boeck. ... ... „ 732
orbicularis, Boott ... ... „ 711
ovata, C. A. Mey. ... ... „ 702
paludosa, Good. ... ... „ 741
? **pandanophylla**, *Clarke* „ 714
pandata, Boott .. .. „ 724
papulosa, Boott ... ... „ 735
parva, *Nees* ... . „ 712
parvibracteata, Nees vi. 731, 732
parviflora, C. A. Mey. ... vi. 733
parvigluma, *Clarke* ... ... „ 716
patula, Host ... ... „ 739
pediformis, C. A. Mey. ... „ 745
peduncularis, Wall. ... ... „ 729
pellucida, Hk. f. & T. ... „ 715
pellucida, Turcz ... ... „ 745
pendula, Huds. ... ... „ 710
perakensis, *Clarke* ... ... „ 720
phacota, *Spreng.* ... ... „ 708
phacota, Drejer ... ... „ 709
picta, Boott .. .. „ 709
pilulifera, Linn. ... ... „ 744
platycarpa, Hochst. ... „ 709
plebeia, *Clarke* ... ... „ 718
Poiretii, Linn. ... ... „ 665
polycephala, *Boott* ... ... „ 725

Carex Vol. Page
polygyna, Boeck. ... ... vi. 748
præcox, Jacq. ... ... „ 744
prælonga, *Clarke* ... ... „ 707
præstans, *Clarke* ... ... „ 723
Prescottiana, *Boott* ... ... „ 710
Prescottiana, H. Mann ... „ 710
producta, Boott ... ... „ 710
pruinosa, *Boott* ... ... „ 709
Pseudo-bicolor, Boeck. ... „ 748
Pseudo-cyperus, *Linn.* ... „ 740
psycrophila, *Nees* ... vi. 731, 732
puberula, Boott ... ... vi. 746
pubescens, Poir. ... ... „ 665
pulchra, *Boott* ... ... „ 727
pulla, Boeck. ... ... „ 748
punctata, Gaud. vi. 737, 738, 748
punctata, Nees ... ... vi. 709
pycnostachya, Kar. & Kir. „ 702
radicalis, *Boott* ... ... „ 729
ramosa, Boott ... ... „ 719
ramosa, Schk. ... ... vi. 718, 719
raphidocarpa, *Nees* ... ... vi. 719
rara, *Boott* ... ... „ 713
recurvirostris, Steud. ... „ 722
remota, *Linn.* ... ... „ 706
repanda, *Clarke* ... ... „ 720
rhizomatosa, *Steud.* ... „ 721
rigida, *Good.* ... ... „ 711
rigida, Strach. ... ... „ 711
rigidifolia, Seub. ... ... „ 737
rivularis, Schk. ... ... „ 701
Rochebruni, Franch. & Sav. „ 706
rostrata, *Stokes* ... ... „ 740
rostrata, Boeck. ... ... „ 742
Royleana, Nees ... ... „ 746
rubella, Boott ... ... „ 722
rubro-brunnea, *Clarke* ... „ 710
sabulosa, Turcz ... ... „ 733
sandwicensis, Boeck. ... „ 710
sanguinea, *Boott* ... ... „ 720
saxatilis, Schk. ... ... „ 711
Schkuhrii, Willd. ... ... „ 734
Schlagintweitiana, *Boeck.* „ 743
Schottii, Boiss. ... ... „ 739
scitula, *Boott* ... ... „ 724
scoparia, Wall. ... ... „ 723
Scopoliana, Schk. ... ... „ 738
sempervirens, Vill. ... ... „ 738
setigera, *D. Don* ... ... „ 743
setigera, Kunth ... ... „ 743
setosa, *Boott* ... ... „ 745
sikkimensis, *Clarke* ... „ 708
socia, Boott ... ... „ 709
songorica, *Kar. & Kir.* ... „ 739
spadicea, Roth ... ... „ 740
speciosa, *Kunth* ... ... „ 729
spicigera, *Nees* ... ... „ 722

Carex Vol. Page
spiculata, *Boott* ... ... vi. 724
stenophylla, *Wahl.* ... vi. 700, 702
stenophylla, Benth. ... vi. 702
stenophylla, Boeck. ... ... „ 748
stipata, Muhl. ... ... „ 703
Stracheyi, *Boott* ... ... „ 727
stramentitia, *Boott* ... ... „ 717
supina, *Wahl.* ... ... „ 733
sylvatica, Huds. ... ... „ 736
teinogyna, *Boott* ... ... „ 705
tenuis, Nees ... ... „ 744
teres, *Boott* ... ... „ 707
teres, ? Boott ... ... „ 710
teretiuscula, *Good.* ... „ 704
Thomsoni, *Boott* ... ... „ 715
Thwaitesi, Boott ... ... „ 715
Thwaitesii, Hance ... ... „ 747
thyrsiflora, Boott ... ... „ 721
tibetica, Boeck. ... ... „ 748
trichostyles, Fran. & Sav. „ 737
trinervis, Nees ... ... „ 696
trispiculata, Boeck. ... „ 748
tristis, *M. Bieb.* ... ... „ 738
tumida, *Boott* ... ... „ 741
unciniiformis, Boeck. ... „ 748
uncinioides, Boott ... ... „ 698
ustulata, *Wahl.* ... ... „ 734
ustulata, Boeck. ... ... „ 748
vacua, Boott ... ... vi. 715, 716
Vahlii, Schk. ... ... vi. 730
valida, Nees ... ... „ 715
vesicaria, *Linn.* ... ... „ 740
vesiculosa, *Boott* ... ... „ 717
vicinalis, *Boott*... ... ... „ 735
Victorialis, Nees ... ... „ 709
vidua, *Boott* ... ... „ 713
vulgaris, *Fries* ... ... „ 711
vulpinaris, *Nees* ... ... „ 702
Walkeri, *Arn.* ... ... „ 725
Wallichiana, *Presc.* ... „ 747
Wallichiana, Boeck ... „ 747
Wallichiana, Clarke ... „ 747
Wallichiana, Spreng. ... „ 703
Wightiana, *Nees* ... ... „ 720
Wightiana, Boott ... vi. 717, 720
Winterbottomi, *Clarke* ... vi. 727
Zollingeri, Boeck. ... ... „ 746
sp., Griff. ... ... vi. 701, 742, 746
sp., Nees ... ... vi. 743
sp., Wall. vi. 702, 704, 705, 709, 710, 714, 715, 716, 717, 718, 720, 723, 730, 734, 737, 743, 747.
Careya, *Roxb.* ... ... ii. 510
arborea, *Roxb.* ... ... „ 511
herbacea, *Roxb.* ... ... „ 510
herbacea, Griff. ... ... „ 510
macrostachya, Jack ... ... „ 509

Careya Vol. Page
orbiculata, Miers ... ... ii. 511
pendula, Griff. ... ... „ 509
sphærica, *Roxb.* ... ... „ 511
Careyæ, Sp. Miq. ... ... iv. 145
Carica Papaya, *Linn.* ... ii. 599
CARICEÆ ... ... vi. 587
Carissa, *Linn.* ... ... iii. 630
Carandas, *Linn.* ... ... „ 630
congesta, Wight ... iii. 630, 631
Dalzellii, Bedd. ... ... iii. 631
diffusa, Roxb. ... ... „ 631
diffusa, Wall. ... ... „ 631
hirsuta, Roth ... ... „ 631
inermis, Vahl ... ... „ 631
lanceolata, Dalz. ... ... „ 631
macrophylla, *Wall.* ... ... „ 631
mitis, Heyne ... ... „ 631
paucinervia, *A. DC.* ... ... „ 631
spinarum, *A. DC.* ... ... „ 631
suavissima, *Bedd.* ... ... „ 632
villosa, Roxb. ... ... „ 631
CARISSEÆ ... ... iii. 621, 623
Carlemannia, *Benth.* ... ... iii. 85
congesta, *Hk. f.* ... ... „ 85
Griffithii, *Benth.* ... ... „ 85
tetragona, *Hk. f.* ... ... „ 85
Carmona heterophylla, Cav. iv. 144
Caroxylon fœtidum, Moq. ... v. 18
indicum, Wight... ... ... „ 15
recurvum, Moq. ... ... „ 15
salicornicum, Moq. ... ... „ 16
Carpesium, *Linn.* ... ... iii. 300
abrotanoides, *Linn.* ... ... „ 301
cernuum, *Linn.* ... ... „ 300
cernuum, DC. ... ... „ 301
ciliatum, Wall.... ... ... „ 301
nepalense, Less. ... ... „ 301
nepalense, Wight ... ... „ 301
pedunculosum, Wall. ... ... „ 301
pubescens, Wall. ... ... „ 301
racemosum, Wall. ... iii. 248, 301
trachelifolium, *Less.* ... iii. 301
Carpha junciformis, Boeck. vi. 674
Carpinus, *Tourn.* ... ... v. 625
faginea, *Lindl.* ... ... „ 626
viminea, *Wall.* ... ... „ 626
Carpophora Hoffmeisteri, Klotz ... ... i. 220
Carpopogon anguineum, Roxb. ii. 185
atropurpureum, Roxb. ... ... „ 186
bracteatum, Roxb. ... ... „ 187
capitatum, Roxb. ... ... „ 187
giganteum, Roxb. ... ... „ 186
imbricatum, Roxb. ... ... „ 185
monospermum, Roxb. ... ... „ 185
niveum, Roxb. ... ... „ 188
pruriens, Roxb.... ... ... „ 187

Vol. Page
Carria speciosa, Gardn. ... i. 292
Carthamus, *Linn.* ... ... iii. 385
lanatus, *Linn.* ... ... „ 386
Oxyacantha, *Bieb.* ... ... „ 386
tinctorius, *Linn.* ... ... „ 386
tinctorius, Clarke ... ... „ 386
Carua, *Ham.* ... ... v. 133
Carum, *Linn.* ... ... ii. 680
anethifolium, *Benth.* ... ... „ 683
Bulbocastanum, *C. Koch* „ 681
Carui, *Linn.* ... ... „ 680
copticum, *Benth.* ... ... „ 682
? diversifolium, *Clarke* ... „ 681
Falconeri, *Clarke* ... ... „ 683
khasianum, *Clarke* ... ... „ 682
meifolium, Bieb. ... ... „ 681
nothum, *Clarke* ... ... „ 681
Roxburghianum, *Benth.* „ 682
stictocarpum, *Clarke* ... ... „ 681
Carumbium baccatum, Kurz v. 470
insigne, Kurz ... ... „ 471
populifolium, Reinw. ... ... „ 469
populneum, Muell. ... ... „ 469
sebiferum, Kurz ... ... „ 470
CARYOPHYLLEÆ ... ... i. 212
CARYOPTERIDEÆ ... ... iv. 561
Caryopteris, *Bunge* ... ... iv. 597
grata, *Benth.* ... ... „ 597
grata, Ham. ... ... „ 596
paniculata, *Clarke* ... ... „ 597
Wallichiana, *Schau.* ... ... „ 597
Caryota, *Linn.* ... ... vi. 422
furfuracea, Bl. ... ... „ 423
Griffithii, Becc. ... ... „ 423
horrida, Moon ... ... „ 415
mitis, *Lour.* ... ... „ 423
mitis, Hb. Calc. ... ... „ 419
mitis, Willd. ? ... ... „ 413
nana, Wall. ... ... „ 423
obtusa, *Griff.* ... ... „ 422
obtusidentata, Griff.... ... ... „ 422
? ochlandra, Hance ... ... „ 423
propinqua, Bl. ... ... „ 423
sobolifera, Wall. ... ... „ 423
urens, *Linn.* ... ... „ 422
urens, Jacq. ... ... „ 423
Casearia, *Jacq.* ... ... ii. 591
? acuminata, *Wall.* ... ... „ 595
albicans, *Wall.* ... ... „ 593
Anavinga, Dalz. & Gibs. „ 593
angustata, Teys. & Binn. „ 592
astyla, *Turcz.* ... ... „ 595
Canziala, Ham.... ii. 592, 593, 594
Championii, Thw. ... ... ii. 592
cinerea, Turcz. ... ... „ 594
coriacea, *Thw.* ... . „ 592
? coriacea, Wall. ...ii. 595, v. 460

Casearia ... Vol. Page
Dallachii, F. Muell. ... ii. 593
elliptica, Willd.... ,, 593
esculenta, *Roxb.* ... ,, 592
glabra, Hort. Calc. ... ,, 593
glabra, Roxb. ... ,, 591
glomerata, *Roxb.* ... ,, 591
graveolens, *Dalz.* ... ,, 592
grewiæfolia, *Vent.* ... ,, 594
Hamiltoni, Wall. ... ,, 592
Kurzii, *Clarke* ... ,, 594
lævigata, Dalz. ... ,, 592
leucolepis, *Turcz.* ... ,, 591
Lobbiana, *Turcz.* ... ,, 594
? *lucida*, Wall. ... ,, 595
macrocarpa, *Clarke* ... ,, 593
macrogyna, Turcz. ... ,, 592
ovata, Roxb. ... ,, 593
ovata, Wall. ... ,, 591
paniculata, Gardn. ... ,, 595
rubescens, *Dalz.* ... ,, 593
subcuneata, Miq. ... ,, 594
tomentosa, *Roxb.* ... ,, 593
Vareca, *Roxb.* ... ,, 593
variabilis, Bl. ... ,, 594
varians, Thw. ... ,, 592
? *viridiflora*, Lamk. ... ,, 591
wynadensis, *Bedd.* ... ,, 594
zeylanica, Thw. ... ,, 592
Casparya ? oligocarpa, DC.... ii. 635
polycarpa, DC. ... ,, 635
? *silhetensis*, A. DC.... ,, 636
Cassia, *Linn.* ... ii. 261
Absus, *Linn.* ... ,, 265
alata, *Linn.* ... ,, 264
amœna, Ham. ... ,, 266
angustifolia, Vahl ... ,, 264
angustissima, Lam. ... ,, 266
arborescens, Vahl ... ,, 265
auricoma, Grah. ... ,, 266
auriculata, *Linn.* ... ,, 263
Bacillus, Gærtn. ... ,, 267
bicapsularis, Linn. ... ,, 263
bracteata, Linn. f. ... ,, 264
Burmanni, Wight ... ,, 264
chinensis, Jacq. ... ,, 262
coccinea, Wall. ... ,, 265
coromandeliana, Jacq. ... ,, 262
dimidiata, Klein ... ,, 266
dimidiata, Roxb. ... ,, 266
esculenta, Roxb. ... ,, 262
exigua, Roxb. ... ,, 265
fastigiata, Vahl ... ,, 265
Fistula, *Linn.* ... ,, 261
florida, Vahl ... ,, 264
fœtida, Pers. ... ,, 262
fœtida, Salisb. ... ,, 263
frutescens, Mill. ... ,, 262

Cassia ... Vol. Page
gallinaria, Collad. ... ii. 263
glauca, *Lam.* ... ,, 265
herpetica, Jacq. ... ,, 264
hirsuta, Linn. ... ,, 263
Horsfieldii, Miq. ... ,, 265
humilis, Collad. ... ,, 263
javanica, *Linn.* ... ,, 267
Kleinii, *W. & A.* ... ,, 266
lanceolata, Wall. ... ,, 264
Leschenaultii, Wall.... ,, 266
marginata, *Roxb.* ... ,, 262
mimosoides, *Linn.* ... ,, 266
montana, *Heyne* ... ,, 264
myriophylla, Wall. ... ,, 266
nodosa, *Ham.* ... ,, 261
obovata, *Collad.* ... ,, 264
obtusa, Roxb. ... ,, 264
obtusifolia, Linn. ... ,, 263
occidentalis, *Linn.* ... ,, 262
palmata, Wall.... ,, 265
prostata, Roxb. ... ,, 266
pumila, *Lam.* ... ,, 266
purpurea, Roxb. ... ,, 263
renigera, *Wall.* ... ,, 262
rhombifolia, Roxb. ... ,, 261
Roxburghiana, Grah. ... ,, 266
Roxburghii, DC. ... ,, 262
Senna, Linn. ... ,, 264
sensitiva, Roxb. ... ,, 266
setigera, DC. ... ,, 265
siamea, *Lam.* ... ,, 264
Sophera, *Linn.* ... ,, 262
Sophera, Wall. ... ,, 262
speciosa, Roxb.... ,, 265
suffruticosa, Koen. ... ,, 265
suffruticosa, Wall. ... ,, 265
sumatrana, Roxb. ... ,, 264
surattensis, Burm. ... ,, 265
Telfairiana, Wall. ... ,, 266
tenella, Roxb. ... ,, 266
timoriensis, *DC.* ... ,, 265
tomentosa, Linn. ... ,, 263
tomentosa, Wall. ... ,, 263
Tora, *Linn.* ... ,, 263
toroides, Roxb... ... ,, 263
Wallichiana, DC. ... ,, 266
Wightiana, Grah. ... ,, 263
CASSIEÆ... ... ii. 61
Cassine discolor, Wall. ... i. 614
excelsa, Wall. ... ,, 603
Cassiope, *D. Don* ... iii. 459
fastigiata, *D. Don* ... ,, 459
selaginoides, *Hk. f. & T.* ,, 460
Cassumunar Roxburghii, Colla vi. 248
Cassytha, *Linn.* ... v. 187
americana, Meissn. ... ,, 188
capillaris, *Meissn.* ... ,, 188

Cassytha Vol. Page
filiformis, *Linn.* ... ... v. 188
guineensis, Meissn. ... ... „ 188
CASSYTHEÆ ... ... v. 117
Castanea argentea, Bl. ... v. 621
brevicuspis, Miq. ... ... „ 621
costata, Bl. ... ... „ 621
diversifolia, Kurz ... ... „ 620
echidnocarpa, Hk. f. & T. „ 623
Falconeri, Hance ... ... „ 622
glomerata, Bl. ... ... „ 623
indica, Roxb. ... ... „ 620
inermis, Lindl. ... ... „ 623
javanica, Bl. ... ... „ 620
martabanica, Wall. ... ... „ 621
microcarpa, Lindl. ... ... „ 623
montana, Bl. ... ... „ 621
? *purpurella*, Miq. ... ... „ 611
rhamnifolia, Kurz ... ... „ 624
Roxburghii, Lindl. ... ... „ 621
semicristata, Kurz ... ... „ 616
spectabilis, Miq. ... ... „ 621
sphærocarpa, Lindl. ... ... „ 622
tribuloides, Wall. ... v. 616, 623
Tungurrut, Wall. ... ... v. 624
Castanopsis, *Spach* ... ... v. 619
argentea, *A. DC.* ... ... „ 621
argyrophylla, *King* ... „ 622
armata, *Spach* ... ... „ 622
armata, D. Don ... ... „ 623
castanicarpa, *Spach* ... „ 621
catalpæfolia, *King* ... ... „ 621
Clarkei, *King* ... ... „ 623
costata, A. DC. ... ... „ 620
discocarpa, Hance ... ... „ 616
diversifolia, *King* ... ... „ 620
echidnocarpa, A. DC. ... „ 623
ferox, Spach .. .. „ 623
Hullettii, *King* ... ... „ 623
Hystrix, *A. DC.* ... ... „ 620
indica, *A. DC.* ... ... „ 620
javanica, *A. DC.* ... ... „ 620
lanceæfolia, Kurz ... ... „ 616
mitifica, Hance... ... ... „ 623
nephelioides, *King* ... ... „ 624
rhamnifolia, *A. DC.* ... „ 624
sumatrana, *A. DC.* ... ... „ 623
tribuloides, *A. DC.* ... ... „ 622
tribuloides, A. DC. ... ... „ 623
trisperma, Scheff ... ... „ 620
Wallichii, *King*... ... ... „ 624
? *sp.* ... ... „ 624
Casuarina, *Forst.* ... ... v. 598
equisetifolia, *Forst.* ... „ 598
muricata, Roxb. ... ... „ 598
CASUARINEÆ ... ... v. 598
Catabrosa, *Beauv.* vii. 310, 346, 421
aquatica, *Beauv.* ... ... vii. 310

Catabrosa Vol. Page
aquatica, Duthie ... ... vii. 311
? *frigida*, Phil. ... ... „ 310
himalaica, *Stapf* ... vii. 311, 421
nutans, *Stapf* ... ... vii. 312, 422
ochroleuca, Guss. ... ... vii. 310
sikkimensis, *Stapf* ... ... „ 311
Thomsoni, *Hk. f.* ... ... „ 311
Wallichii, *Hk. f.* ... vii. 312, 422
Catamixis, *Thoms.* ... ... iii. 389
baccharoides, *Thoms.* ... „ 389
Catapodium filiforme, Nees vii. 287, 288
fusiforme, Benth. ... ... vii. 287
unilaterale, Griseb. ... „ 356
Catappa Benzoin, Gærtn. ... ii. 444
domestica, Rumph. ... ... „ 444
litorea, Rumph. ... ... „ 444
sylvestris, Rumph. ... ... „ 444
Catenaria laburnifolia, Benth. ii. 163
Catha Benthamii, Gardn. & Champ. ... ... i. 618
emarginata, G. Don ... „ 621
fruticosa, Thw. ... ... „ 619
Heyneana, Walp. ... ... „ 620
monosperma, Benth. ... „ 618
montana, G. Don ... ... „ 621
ovata, Walp. ... ... „ 619
Rothiana, Walp. ... ... „ 620
rufa, G. Don ... ... „ 620
Wallichii, G. Don ... ... „ 621
zeylanica, G. Don ... ... „ 641
Catharanthus roseus, G. Don iii. 640
Cathcartia, *Hk. f.* ... ... i. 119
villosa, *Hk. f.* ... ... „ 119
Catonia elliptica, Vahl ... iv. 181
glauca, Vahl ... ... „ 181
Caturus spiciflorus, Jacq. ... v. 580
spiciflorus, Roxb. ... ... „ 417
Caucalis, *Linn.* ... ... ii. 718
Anthriscus, *Scop.* ... ... „ 718
elata, Wall. ... ... „ 718
latifolia, *Linn.* ... ... „ 719
leptophylla, *Linn.* ... ... „ 719
Caulinia alzanensis, Poll. ... vi. 569
fragilis, Willd. ... ... „ 569
indica, Wall. ... ... „ 569
indica, Willd. ... ... „ 569
ovalis, Br. ... ... v. 663
Cautleya, *Royle* ... ... vi. 208
Cathcartii, *Baker* ... ... „ 208
lutea, *Royle* ... ... „ 208
petiolata, *Baker* ... ... „ 209
robusta, *Baker* ... ... „ 209
spicata, *Baker* ... ... „ 209
Cavallium urens, Schott & Endl. ... ... i. 355
Ceanothus asiaticus, Lamk.... i. 642
capsularis, Forst. ... ... „ 642

Ceanothus Vol. Page
circumscissa, Gærtn. i. 641
nipalensis, Wall. „ 640
paniculatus, Roth „ 617
triqueter, Wall. „ 639
Wightiana, Wall. „ 639
zeylanica, Heyne „ 641
Cecicodaphne glaucescens, Nees v. 135
Cedrela, *Linn.* i. 568
australis, F. Muell. „ 569
febrifuga, Bl. „ 568
hexandra, Wall. „ 568
? *longifolia*, Wall. „ 568
? *multijuga*, Kurz „ 569
? *odorata*, Hort. Kew. „ 568
serrata, Royle „ 568
Toona, *Roxb.* „ 568
? *velutina*, DC. „ 568
? *villosa*, Roxb. „ 568
sp., DC. „ 568
CEDRELEÆ i. 541
Cedrus, *Loud.* v. 653
Deodara, Loud. „ 653
Libani, *Barrel.* „ 653
Ceiba pentandra, Gærtn. i. 350
CELASTREÆ i. 606
Celastrinea, Griff. iii. 515
Celastrinea ? Wall. i. 614, 625, ii. 3, iii. 536
CELASTRINEÆ i. 606
Celastrus, *Linn.* i. 617
acuminata, Wall. „ 570
alnifolia, D. Don „ 617
? *attenuata*, Wall. „ 619
bivalvis, Jack „ 614
buxifolia, Roxb. „ 621
crenata, Roth „ 621
crenulata, Wall. „ 618
dependens, Wall. „ 617
emarginata, W. & A. „ 621
emarginata, Willd. „ 621
Finlaysoniana, Wall. „ 618
glauca, Vahl „ 623
Heyneana, Roth „ 620
Hindsii, Benth. „ 618
Jackiana, Steud. „ 618
lucida, Wall. „ 618
Metziana, Turcz „ 617
micrantha, Roxb. „ 618
monosperma, *Roxb.* „ 618
montana, Roth „ 621
montana, W. & A. „ 621
multiflora, Roxb. „ 617
neglecta, Wall. „ 619
nutans, Roxb. „ 617
obtusifolia, Roxb. „ 618
opposita, Wall. „ 617
ovata, Wall. „ 619

Celastrus Vol. Page
oxyphylla, Wall. i. 619
pallida, Wall. „ 621
paniculata, *Willd.* „ 617
pauciflora, Wall. „ 618
racemosa, Wall. i. 618, ii. 312
rigida, Wall. i. 621
robusta, Roxb. „ 622
Rothiana, R. & S. „ 617
Rothiana, W. & A. „ 620
Royleana, Wall. „ 620
rufa, Wall. „ 620
? *senegalensis*, Lamk. „ 621
serrulata, Roth „ 620
spinosa, Royle „ 620
stylosa, *Wall.* „ 618
trigyna, Lamk. „ 618
venulosa, *Wall.* „ 618
verticillata, Roxb. i. 199, 618
Wallichiana, Spreng. i. 620
Wallichiana, Wall. „ 620
Wallichiana, W. & A. „ 621
? *Wightiana*, Wall. „ 617
zeylanica, Roth „ 641
Celosia, *Linn.* iv. 714
albida, Willd. „ 717
allmanoides, Moq. „ 715
argentea, *Linn.* „ 714
aspera, Roth „ 717
baccata, Retz. „ 714
cernua, Roxb. „ 715
coccinea, Linn. „ 715
comosa, Retz. „ 715
corymbosa, Willd. i. 245
cristata, *Linn.* iv. 715
dichotoma, Heyne „ 717
exstipulata, Hornem. „ 715
glauca, Rottl. & Willd. „ 716
lanata, Linn. „ 727
linearis, Sweet „ 714
margaritacea, Linn. „ 714
missionis, Wall. „ 716
Monsonia, Retz. „ 729
nodiflora, Linn. „ 717
nodiflora, Wall. „ 717
patula, Willd. „ 716
polygonoides, *Retz.* „ 715
polygonoides, Wall. „ 715
pulchella, *Moq.* „ 715
pyramidalis, Burm. iv. 715, 717
sanguinea, Hoffm. iv. 716
spinescens, Hb. Russel „ 730
thyrsiflora, Wall. „ 716
trigyna, Willd. „ 715
CELOSIEÆ iv. 713
Celsia, *Linn.* iv. 251
coromandeliana, *Vahl* „ 251
viscosa, Roth „ 251

Celsia Vol. Page
viscosa, Wight ... iv. 250
CELTIDEÆ ... v. 477
Celtis, *Linn.* ... v. 481
Acata, Ham. ... „ 482
amboinensis, Willd. ... „ 484
angustifolia, Lindl. ... „ 484
australis, *Linn.* ... „ 482
caucasica, Willd. ... „ 482
caudata, Wall. ... „ 484
cinnamomea, *Lindl.* ... „ 482
dysodoxylon, Thw. ... „ 483
elongata, Wall. ... „ 589
eriocarpa, Dcne. ... „ 482
glabra, Planch. ... „ 482
Hamiltoni, Planch. ... „ 482
mollis, Wall. ... „ 482
orientalis, Linn. ... „ 484
philippinensis, Blanco ... „ 483
politoria, Wall. ... „ 484
reticulata, Hk. f. & T. ... „ 486
Roxburghii, Planch. ... „ 482
serotina, Planch. ... „ 482
tetrandra, *Roxb.* ... „ 482
tetrandra, Wall. ... „ 589
tomentosa, Roxb. ... „ 484
trinervia, Roxb. ... „ 482
virgata, Roxb. ... „ 483
Waitzii, Bl. ... „ 483
Wightii, *Planch.* ... iv. 716, v. 483
Cenchrus, *Linn.* ... vii. 89
ægyptius, Beauv. ... „ 296
alopecuroides, Thunb. ... „ 82
Anjania, Ham. ... „ 88
annularis, Anderss. ... „ 90
asperifolius, Desf. ... „ 86
biflorus, *Roxb.* ... „ 89
bulbifer, Hochst. ... „ 89
bulbosus, Fres. ... „ 89
catharticus, *Delile* ... „ 90
ciliaris, Linn. ... „ 88
digynus, Schreb. ... „ 88
echinatus, Linn. ... „ 90
echinatus, A. Rich. ... „ 90
echinatus, Wall. ... „ 89
echinoides, Wight ... „ 88
frutescens, Sieb. ... „ 304
granularis, Linn. f. ... „ 159
hordeiformis, Pers. ... „ 86
hordeiformis, Rottl. ... „ 84
? *hordeiformis*, Thunb. ... „ 85
Lapeta, Ham. ... „ 90
lappaceus, Heyne ... „ 58
lappaceus, Linn. ... „ 332
lappaceus, Tausch ... „ 89
linearis, Lam. ... „ 97
longifolius, Hochst. ... „ 88
macrostachyus, Hochst. ... „ 89

Cenchrus Vol. Page
montanus, Nees ... vii. 89
muricatus, Linn. ... „ 96
muricatus, Hb. Russ. ... „ 97
mutabilis, Wight ... „ 88
niloticus, Fig. & Not. ... „ 90
orientalis, Willd. ... „ 86
paniceus, Heyne ... „ 82
pennisetiformis, Hochst. vii. 88, 89
purpurascens, Thunb. ... vii. 85
quinquevalvis, Ham. ... „ 89
racemosus, Linn. ... „ 97
ramosissimus, Poir. ... „ 85
rufescens, Desf. ... „ 88
Schimperi, Hochst. ... „ 89
setigerus, Heyne ... „ 89
setosus, Sw. ... „ 87
spicatus, Cav. ... „ 82
tripsaceus, Linn. ... „ 96
tripsacoides, Br. ... „ 89
uniflorus, Ehrb. ... „ 89
Cenia, Juss. ... iii. 316
turbinata, Pers. ... „ 316
Cenolophon, Horan. ... vi. 242
vittellinum, Horan. ... „ 243
Centaurea, *Linn.* ... iii. 384
Calcitrapa, *Linn.* ... „ 385
Cyanus, *Linn.* ... „ 384
depressa, *M. Bieb.* ... „ 385
divaricata, Wall. ... „ 383
iberica, *Stev.* ... „ 385
lanata, Roxb. ... „ 384
melitensis, *Linn.* ... „ 385
pallida, Wall. ... „ 379
patula, DC. ... „ 383
phyllocephala, *Boiss.* ... „ 385
taraxicifolia, D. Don ... „ 370
Centaurium malabaricum, Borkh. ... iv. 104
Centipeda, *Lour.* ... iii. 317
minuta, Benth. ... „ 317
orbicularis, *Lour.* ... „ 317
orbicularis, Clarke ... „ 317
Centotheca, *Desv.* ... vii. 331
affinis, Wall. ... „ 331
lappacea, *Desv.* ... „ 332
latifolia, Trin. ... „ 332
parviflora, Anderss. ... „ 332
Centranthera, *Br.* ... iv. 300
Brunoniana, *Benth.* ... „ 301
Brunoniana, Thw. ... „ 301
grandiflora, *Benth.* ... „ 301
hispida, *Br.* ... „ 301
hispida, Benth. ... „ 301
humifusa, *Wall.* ... „ 301
nepalensis, D. Don ... „ 301
procumbens, *Benth.* ... „ 301
Centratherum, *Cass.* ... iii. 227

Centratherum Vol. Page
chinense, Less. ... iii. 235
courtallense, *Benth.* ... „ 227
Hookeri, *Clarke* ... „ 228
Metzianum, Hk. f. ... „ 228
molle, *Benth.* ... „ 227
phyllolænum, *Benth.* ... „ 228
reticulatum, *Benth.* ... „ 227
Ritchiei, *Hk. f.* ... „ 228
scariosum, Clarke ... „ 236
tenue, *Clarke* ... „ 228
Centrophorum chinense, Trin. vii. 188
Centrostachys aquatica, Wall. iv. 730
diandra, Wall. ... „ 731
Centrostemma Lindleyanum, Dcne. ... iv. 52
multiflorum, Dcne. ... „ 52
sp., Hk. f. & T. ... „ 53
Centrostylis zeylanica, Baill. v. 419
Centunculus, *Linn.* ... iii. 506
tenellus, *Duby* ... „ 506
Cephaelis, *Sw.* ... iii. 178
cuneata, *Korth.* ... „ 178
Griffithii, *Hk. f.* ... „ 178
herbacea, Kurz ... „ 178
Ipecacuanha, Rich. ... „ 178
stipulacea, Bl. ... „ 178
Cephalandra, *Schrad.* ... ii. 621
indica, *Naud.* ... „ 621
quinqueloba, Schrad. ... „ 621
Schimperi, Naud. ... „ 621
Cephalanthera, *Rich.* ... vi. 124
acuminata, Lindl. ... „ 125
cucullata, Boiss. ... „ 125
ensifolia, *Rich.* ... „ 125
grandiflora, S. F. Gray ... „ 125
Royleana, Regel ... „ 126
Thomsoni, *Rchb. f.* ... „ 125
xyphophyllum, Rchb. f. ... „ 125
Cephalanthus, *Linn.* ... iii. 23
aralioides, Z. & M. ... iii. 24, 25
chinensis, Lamk. ... iii. 26
naucleoides, *DC.* ... „ 24
occidentalis, Linn. ... „ 24
pilulifer, Lamk. ... „ 25
Cephalaria cachemirica, Dcne. iii. 217
Cephalocroton indicus, Bedd. v. 418
leucocephalus, Muell. ... „ 419
zeylanicus, Baill. ... „ 419
Cephaloschænus articulatus, Nees ... vi. 670
longirostris, Nees ? ... „ 669
longisetis, Nees ... „ 669
parvus, Nees ... „ 668
zeylanicus, Nees ... „ 670
Cephalostachyum, *Munro* ... vii. 411
capitatum, *Munro* ... „ 412
flavescens, *Kurz* ... „ 413
Cephalostachyum Vol. Page
Fuchsianum, *Gamble* ... vii. 413
Griffithii, Kurz ... „ 411
latifolium, *Munro* ... „ 412
pallidum, *Munro* ... „ 412
pergracile, *Munro* ... „ 413
schizostachyoides, Kurz ... „ 393
virgatum, *Kurz* ... „ 414
Cephalostigma, *A. DC.* ... iii. 428
anagalloides, Royle ... „ 429
flexuosum, *Hk. f. & T.* ... „ 428
hirsutum, *Edgew.* ... „ 429
hirsutum, Hk. f. & T. ... „ 428
Hookeri, *Clarke* ... „ 429
paniculatum, Wall. ... „ 429
paniculatum, *A. DC.* ... „ 428
Schimperi, *Hochst.* ... „ 428
spathulatum, Thw. ... „ 439
sp., Hk. f. & T. ... „ 429
Cephalotaxus, *Sieb. & Zucc.* v. 647
Griffithii, *Hk. f.* ... „ 648
Mannii, *Hk. f.* ... „ 647
Ceramium tomentosum, Bl. ... v. 73
Cerasiocarpum, *Hk. f.* ... ii. 628
? Maingayi, *Clarke* ... „ 629
? penangense, *Clarke* ... „ 629
zeylanicum, *Hk. f.* ... „ 629
Cerastium, *Linn.* ... i. 227
aquaticum, Linn. ... „ 229
cordifolium, Roxb. ... „ 244
dahuricum, *Fisch.* ... „ 227
glomeratum, Thuill. ... „ 228
grandiflorum, D. Don ... „ 228
indicum, *W. & A.* ... „ 227
membranaceum, Jacquem. „ 228
napalense, Wall. ... „ 228
Thomsoni, *Hk. f.* ... „ 228
trigynum, *Villars* ... „ 227
triviale, Link ... „ 228
vulgatum, *Linn.* ... „ 228
Cerasus acuminata, Wall. ... ii. 317
capricida, Wall. ... „ 316
cornuta, Wall. ... „ 315
glaucifolia, Wall. ... „ 316
integerrima, Wall. ... „ 317
Jenkinsii, Hk. f. ... „ 317
Lindleyana, Wall. ... „ 316
martabanica, Wall. ... „ 316
nepalensis, Ser. ... „ 316
Phoshia, Ham. ... „ 314
Pseudo-cerasus, G. Don ... „ 315
Puddum, Wall. ... „ 314
punctata, Hk. f. ... „ 317
rufa, Wall. ... „ 314
tomentosa, Wall. ... „ 314
undulata, Ser. ... „ 316
Ceratanthera, Lestib. ... vi. 204
Ceratocephalus, Mœnch. ... i. 16

Ceratocephalus Vol. Page
falcatus, Pers. ... ... i. 16
orthoceras, DC.... ... ... „ 16
? *Ceratochilus orchideus*, Lindl. vi. 198
? *Ceratogynum rhamnoides*, Wight. ... ... v. 335
Ceratolobus, *Bl.* ... ... vi. 477
Kingianus, *Becc.* ... ... „ 477
lævigatus, *Becc.* ... ... „ 477
Ceratonychia Nidus, Edgew. iv. 712
Ceratophorus sp., Maingay ... iii. 547
CERATOPHYLLEÆ ... ... v. 639
Ceratophyllum, *Linn.* ... v. 639
demersum, *Linn.* ... ... „ 639
demersum, Klein ... ... „ 640
indicum, Willd. ... ... „ 640
missionis, Wall. ... ... „ 640
muricatum, Cham. ... ... „ 640
oxyacanthum, Cham. ... „ 640
platyacanthum, Cham. ... „ 640
tuberculatum, Cham. ... „ 639
verticillatum, Roxb. ... „ 639
Ceratopsis rosea, Lindl. ... vi. 124
Ceratostachys arborea, Bl. ... ii. 747
Ceratostema angulatum, Griff. iii. 447
miniatum, Griff. ... ... „ 445
nanum, Griff. ... ... „ 448
vacciniaceum, Roxb. ... „ 452
variegatum, Griff. ... ... „ 446
varicgatum, Roxb. ... iii. 443, 446
Ceratostigma, *Bunge* ... ... iii. 481
Griffithii, *Clarke* ... ... „ 481
Ceratostylis, *Bl.* ... ... v. 825
braccata, Rchb. f. ... ... „ 826
clathrata, *Hk. f.* v. 825, vi. 193
Gigas, Bl. ... ... v. 826
himalaica, *Hk. f.* v. 826, vi. 193
lancifolia, *Hk. f.* v. 826, vi. 193
malaccensis, *Hk. f.* v. 825, vi. 193
pellita, Rchb. f. ... ... v. 809
pendula, *Hk. f.* ...v. 826, vi. 193
retisquama, Rchb. f. ... v. 826
robusta, *Hk. f.* ... ...v. 827, vi. 193
teres, *Rchb. f.* ... ...v. 825, vi. 85
Cerbera, *Linn.* ... ... iii. 637
dichotoma, Lodd. ... ... „ 645
fruticosa, Ker ... ... „ 639
lactaria, Ham. ... ... „ 638
laurifolia, Lodd. ... ... „ 638
Manghas, Linn. ... ... „ 645
Manghu, Linn. ... ... „ 638
Odollam, *Gærtn.* ... ... „ 638
parviflora, Wall. ... ... „ 638
salutaris, Lour. ... iii. 421, 638
Cercocoma singaporiana, Wall. iii. 656
Wallichii, Miq.... ... ... „ 667
Ceriops, *Arn.* ... ... ii. 436
Candolleana, *Arn.* ... ... „ 436
Ceriops Vol. Page
Roxburghiana, *Arn.* ... ii. 436
Ceriscus fragrans, Nees ... iii. 103
malabaricus, Gærtn. ... „ 110
Cerocarpus aqueus, Hassk. ... ii. 473
Cerochilus rubens, Lindl. ... vi. 115
Ceropegia, *Linn.* ... ... iv. 66
acuminata, *Roxb.* ... ... „ 70
acuminata, Dalz. & Gibs. „ 70
albiflora, *Hk. f.*... ... ... „ 75
angustifolia, *Wight* ... „ 72
angustifolia, Dalz. ... ... „ 67
arcta, Nimmo ... ... „ 75
Arnottiana, *Wight* ... ... „ 74
attenuata, *Hk.* ... ... „ 67
Beddomei, *Hk. f.* ... ... „ 75
biflora, Linn. ... ... „ 75
brevicollis, *Hk. f.* ... ... „ 74
brevitubulata, Bedd. ... „ 66
bulbosa, *Roxb.* ... ... „ 67
Candelabrum, *Linn.* ... „ 70
Candelabrum, Roxb. ... „ 70
Candelabrum, Thw. ... ... „ 71
ciliata, *Wight* ... ... „ 72
Decaisneana, *Wight* ... „ 73
Decaisneana, Miq. ... ... „ 42
elegans, *Wall.* ... ... „ 68
Elliottii, *Hk. f.*... ... ... „ 70
ensifolia, *Bedd.* ... ... „ 75
esculenta, Edgew. ... ... „ 68
fimbrifera, *Bedd.* ... ... „ 66
Gardneri, *Hook.* ... ... „ 69
hirsuta, *W. & A.* ... ... „ 71
hirsuta, Wight ... ... „ 71
Hookeri, *Clarke* ... ... „ 73
intermedia, *Wight* ... ... „ 71
? *Jacquemontiana*, Dcne. ... „ 72
juncea, *Roxb.* ... ... „ 68
lanceolata, Wight ... ... „ 69
Lawii, *Hk. f.* ... ... „ 67
longifolia, *Wall.* ... ... „ 69
longifolia, Hk. f. & T. ... „ 72
lucida, *Wall.* ... ... „ 73
Lushii, Grah. ... ... „ 68
macrantha, *Wight* ... ... „ 74
micans, Nimmo ... ... „ 75
mucronata, Roth ... ... „ 70
? *Munroi*, Wight ... ... „ 67
mysorensis, *Wight* ... ... „ 69
oculata, *Hook.* ... ... „ 72
odorata, *Nimmo* ... ... „ 75
ophiocephala, Dalz. ... ... „ 72
pubescens, *Wall.* ... ... „ 73
pusilla, *Wight* ... ... „ 66
? *sphenanantha*, W. & A. „ 68
sphenantha, Dcne. ... ... „ 68
spiralis, *Wight* ... ... „ 66
spiralis, Hk. f. & T. ... „ 67

Ceropegia Vol. Page
Stocksii, *Hk. f.* ... ... iv. 74
Thwaitesii, *Hook.* ... ... „ 71
tuberosa, *Roxb.* ... ... „ 70
tuberosa, Wall. ... ... „ 71
vincæfolia, Hook. ... ... „ 72
Walkeriæ, *Wight* ... ... „ 69
Wallichii, *Wight* ... ... „ 67
Wightii, *Grah.* ... ... „ 68
sp., Hk. f. & T. ... iv. 67, 73
CEROPEGIEÆ... ... ... iv. 3, 63
CESTRINÆ ... ... iv. 229
Chænolobium decemjugum, Miq. ... ... ii. 253
septemjugum, Miq. ... ... „ 253
Chæradoplectron Spiranthes, Schau. ... ... vi. 163
Chærophyllum, *Linn.* ... ii. 690
acuminatum, *Lindl.* ... „ 691
aromaticum, Jacq. ... ... „ 691
aureum, Linn. ... ... „ 691
cachemiricum, *Clarke* ... „ 691
capnoides, *Benth.* ... ... „ 691
gracillimum, Klotz. ... „ 671
millefolium, Klotz. ... ... „ 671
reflexum, *Lindl.* ... ... „ 691
villosum, *Wall.* ... ii. 690, 691
Chætaria Ascenscionis, Beauv. vii. 225
cærulescens, Beauv. ... ... „ 225
canariensis, Beauv. ... ... „ 225
curvata, Nees ... ... „ 225
cyanantha, Nees ... ... „ 225
depressa, Beauv. ... ... „ 225
depressa, Wight ... ... „ 225
elatior, Beauv. ... ... „ 225
gigantea, Beauv. ... ... „ 225
Hystrix, Beauv. ... ... „ 226
Hystrix, Wight... ... ... „ 225
mauritiana, Nees ... ... „ 225
murina, Nees ... ... „ 227
Royleana, Nees ... ... „ 227
setacea, Beauv. ... ... „ 225
trichodes, Nees ... ... „ 224
Chætocarpus, *Thw.* ... ... v. 460
castanocarpus, *Thw.* ... „ 460
castanocarpus, Thw. ... ii. 595
coriaceus, *Thw.* ... ... v. 461
pubescens, *Hk. f.* ... ... „ 461
pungens, Thw. ... ... v. 460, 461
Chætocyperus costulatus, Nees vi. 629
Limnocharis, Nees ... ... „ 629
setaceus, Nees ... ... „ 629
Chætospora calostachya, Br. vi. 673
nigricans, Kunth ... ... „ 673
Chætostachys multifida, Benth. iv. 631
Chailletia, *DC.* ... ... i. 570
Brunoniana, Wall. ... ... „ 570
deflexifolia, *Turcz.* ... ... „ 571
Chailletia Vol. Page
edulis, Kurz ... ... i. 594
gelonioides, *Hk. f.* ... ... „ 570
Griffithii, *Hk. f.* ... ... „ 571
Helferiana, *Kurz* ... ... „ 570
lanuginosa, Maing. ... ... „ 572
Laurocerasus, *Planch.* ... „ 572
longipetala, *Turcz* ... ... „ 571
sumatrana, Miq. ... ... „ 570
sp., Wall. ... ... „ 572
CHAILLETIACEÆ ... ... i. 569
Chalarium, DC. ... ... ii. 164
Chalcas intermedia, Roem. i. 502
paniculata, Linn. ... ... „ 503
paniculata, Roem. ... ... „ 502
sumatrana, Roem. ... ... „ 503
Chamabainia, *Wight* ... ... v. 580
cuspidata, *Wight* ... ... „ 580
squamigera, Wedd. ... ... „ 580
Chamæbuxus, Tourn. ... ... i. 200
arillata, Hassk. ... ... „ 200
paniculata, Hassk. ... ... „ 200
Chamæcladon, Schott ... ... vi. 531
angustifolium, Schott ... „ 533
Griffithii, Schott ... ... „ 534
humile, Miq. ... ... „ 534
obliquatum, Schott ... ... „ 535
ovatum, Schott ... ... „ 536
purpurescens, Schott ... „ 535
sanguinolentum, Griff. ... „ 532
truncatum, Schott ... ... „ 535
Chamæmelium præcox, Visiani iii. 316
Chamæraphis, *Br.* ... ... vii. 62
abortiva, Poir. ... ... „ 63
aspera, Nees ... ... „ 62
depauperata, Nees ... ... „ 62
gracilis, *Hack.* ... ... „ 62
paradoxa, Poir.... ... ... „ 62
spinescens, *Poir.* ... ... „ 62
spinosa, Beauv. ... ... „ 62
Chamærhodos, *Bunge*... ... ii. 360
sabulosa, *Bunge* ... ... „ 360
Chamærops excelsa, Thunb.... vi. 436
Fortunei, Hook. ... ... „ 436
Griffithii, Lodd. ... ... „ 436
khasyana, Griff. ... ... „ 436
Martiana, Wall. ... ... „ 436
Ritchieana, Griff. ... ... „ 429
Chamissoa albida, Mart. ... iv. 717
angustifolia, Hb. Ham. ... „ 717
arabica, Spreng. ... ... „ 718
Brownii, Steud. ... ... „ 717
ciliata, Spreng. ... ... „ 718
commutata, Spreng. ... „ 718
dichotoma, Moq. ... ... „ 717
javanica, Hassk. ... ... „ 717
muricata, Spreng. ... ... „ 718
pyramidalis, Moq. ... ... „ 717

Vol. Page
Champereia, *Griff.* ... ... v. 236
Griffithiana, *Planch.* ... „ 236
Perrottetiana, Baill. ... „ 234
sp., Griff. ... ... „ 236
Championia, *Gardn.* ... ... iv. 361
multiflora, Clarke ... ... „ 368
reticulata, *Gardn.* ... ... „ 361
Chandana, Jones ... ... v. 231
Chapelliera glomerata, Nees vi. 675
Chaptalia gossypina, Royle iii. 390
maxima, D. Don ... ... „ 391
Chartacalyx, *Maing.* ... ... i. 382
accrescens, *Mast.* ... ... „ 382
Chasalia, *Comm.* ... ... iii. 176
curviflora, *Thw.* ... iii. 149, 176
curviflora, Miq. ... ... iii. 176
expansa, Miq. ... ... „ 165
lurida, Miq. ... ... „ 176
montana, Miq. ... ... „ 174
perforata, Miq. ... ... „ 172
rostrata, *Miq.* ... ... „ 177
Sangiana, Miq. ... ... „ 176
tetrandra, Miq. ... ... „ 176
Chaulmoogra odorata, Roxb. i. 195
Chavannesia esculenta, A. DC. iii. 658
lucida, A. DC. ... ... „ 658
Chavica Arnottiana, Miq. ... v. 86
Betle, Miq. ... ... „ 85
boehmeriæfolia, Miq. ... „ 85
Chuvya, Miq. ... ... „ 85
? *exasperata*, Miq. ... ... „ 96
Guigual, Miq. ... ... „ 87
? *lanceolata*, Miq. ... ... „ 85
macrostachya, Miq. ... ... „ 85
maritima, Miq. ... ... „ 84
miniata, Miq. ... ... „ 85
Mullesua, Miq. ... ... „ 87
Neesiana, Miq. ... ... „ 83
officinarum, Miq. ... ... „ 84
peepuloides, Miq. ... ... „ 83
peepuloides, Wight ... ... „ 84
penangensis, Miq. ... ... v. 88, 90
petiolata, C. DC. ... ... v. 84, 87
pothoides, Miq. ... ... v. 96
retrofracta, Miq. ... ... „ 96
Roxburghii, Miq. ... ... „ 83
sarmentosa, Miq. ... ... „ 83
Siriboa, Miq. ... ... „ 85
sphærostachya, Miq. ... „ 87
Suipiqua, Miq. ... ... „ 96
sylvatica, Miq. ... ... „ 84
syringæfolia, Miq. ... ... „ 96
thermalis, Miq. ... ... „ 96
Thomsonii, C. DC. ... ... „ 87
Wallichii, Miq. ... ... „ 86
sp., Hk. f. & T. ... ... v. 84, 87
Cheilosandra leptopus, Griff. iv. 368

Vol. Page
Cheilotheca, *Hk. f.* ... ... iii. 477
khasiana, *Hk. f.* ... ... „ 477
Cheiranthus, *Linn.* ... ... i. 132
albiflorus, *T. And.* ... ... „ 133
Cheiri, Linn. ... ... „ 132
Farsetia, Wall. ... ... „ 140
himalaicus, Hk. f. & T. ... „ 132
himalayensis, *Camb.* ... „ 132
parryoides, *Kurz* ... ... „ 132
Stewartii, *T. And.* ... ... „ 132
sp., Hk. f. & T. ... ... „ 133
Cheirostylis, *Bl.* ... ... vi. 104, 179
flabellata, *Wight* ... ... vi. 105
Griffithii, *Lindl.* ... ... „ 105
malleifera, *Par. & Rchb. f.* „ 105
parvifolia, *Lindl.* ... ... „ 105
pubescens, *Par. & Rchb. f.* „ 106
pusilla, *Lindl.* ... ... vi. 99, 105
Chelonanthera speciosa, Bl. v. 834
sulphurea, Bl. ... ... „ 833
Chelone filiformis, Ham. ... iv. 362
latifolia, Ham. ... ... „ 374
rubicunda, Ham. ... ... „ 362
CHELONEÆ ... ... iv. 73, 247, 257
Chenolea, *Thunb.* ... ... v. 9
divaricata, *Hk. f.* ... ... „ 10
? **sedoides**, *Hk. f.* ... ... „ 10
CHENOLEEÆ ... ... v. 2
CHENOPODIACEÆ ... ... v. 1
CHENOPODIEÆ ... ... v. 1
Chenopodina indica, Wight v. 14
maritima, Moq. ... ... „ 14
parviflora, Moq. ... ... „ 15
prostrata, Moq. ... ... „ 15
pygmæa, Moq. ? ... ... „ 15
Chenopodium, *Linn.* ... ... v. 3
album, *Linn.* ... ... „ 3
ambrosiodes, *Linn.* ... ... „ 4
Augustanum, All. ... ... „ 10
Blitum, *Hk. f.* ... ... „ 5
Botrys, *Linn.* ... ... „ 4
caudatum, Jacq. ... ... iv. 721
Chamrium, Ham. ... ... v. 4
Gandhium, Ham. ... ... „ 4
giganteum, D. Don ... ... „ 3
glaucum, *Linn.* ... ... „ 4
Hookerianum, Moq. ... ... „ 4
hybridum, *Linn.* ... ... „ 3
ilicifolium, Griff. ... ... „ 4
laciniatum, Linn. ... ... „ 3
maritimum, Linn. ... ... „ 14
murale, *Linn.* ... ... „ 4
nepalense, Hort. Monsp. „ 3, 4
opulifolium, *Schrad.* ... „ 3
prostratum, Roxb. ... ... „ 14
purpurascens, Ham. ... ... „ 3
scoparium, Linn. ... ... „ 11

Chenopodium Vol. Page
viride, Linn. ... v. 3
? *vulpinum*, Wall. ... „ 3
vulpinum, Wall. ... „ 5
Cherleria grandiflora, D. Don i. 239
juniperina, D. Don ... „ 239
Chesneya, Lindl. ... ii. 117
vaginalis, J. & S. ... „ 117
Chickrassia, *Juss.* ... i. 567
Nimmonii, Grah. ... „ 568
tabularis, *Juss.* ... „ 568
trilocularis, Roem. ... „ 568
velutina, Roem. ... „ 568
Chiliandra obovata, Griff. ... iv. 374
Chilmoria dodecandra, Ham. i. 195
Chilocalyx ellipticus, Turcz. i. 513
perfoliatus, Hassk. ... v. 46
Chilocarpus, *Bl.* ... iii. 626
atro-viridis, *Bl.* ... „ 626
ceylanicus, Wight ... „ 624
cuspidatus, Benth. ... „ 629
decipiens, *Hk. f.* ... „ 627
denudatus, Bl. ... „ 626
enervis, *Hk. f.* ... „ 626
flavescens, Dyer... ... „ 625
Maingayi, *Dyer*... ... „ 627
malabaricus, Bedd. ... „ 626
Chilochloa arenaria, Beauv. vii. 237
aspera, Beauv. ... „ 237
Chiloschista, Lindl. ... vi. 33
usneoides, Lindl. ... „ 37
usneoides, Wight ... „ 37
Chimaphila, sp. Griff. ... iii. 476
Chionachne barbata, Br. ... vii. 102
Koenigii, Thw. ... „ 102
Massii, Balans. ... „ 102
Wightii, Munro ... „ 101
Chionanthus albidiflora, Thw. iii. 608
axillaris, R. Br. ... „ 608
courtallensis, Bedd. ... „ 609
Ghæri, Gærtn. ... „ 611
insignis, Miq. ... „ 610
intermedia, Bedd. ... „ 609
leprocarpa, Bedd. ... „ 608
leprocarpa, Thw. ... „ 608
macrocarpa, Bl.... ... „ 610
macrophylla, Kurz ... „ 610
malabarica, Bedd. ... „ 607
minutiflora, Kurz ... „ 610
montana, Bl. ... „ 610
montanus, Kurz ... „ 610
monticola, Bl. ... „ 610
palembanica, Miq. ... „ 609
picrophloia, Muell. ... „ 609
ramiflora, Roxb. ... „ 611
? *smilacifolia*, Wall. ... „ 618
zeylanica, Linn. ... „ 608
Chionotria monogyna, Walp. i. 500

Chionotria Vol. Page
? *rigida*, Jack ... i. 500
Chirita, *Ham.* ... iv. 355
acuminata, *Br.*... ... „ 359
acuminata, A. DC. ... „ 349
bifolia, *D. Don* ... „ 357
brevipes, *Clarke* ... „ 359
caliginosa, *Clarke* ... „ 360
calva, *Clarke* ... „ 358
Clarkei, *Hk. f.* ... „ 359
communis, Gardn. ... „ 356
diaphana, Royle ... „ 357
dimidiata, *Br.* ... „ 357
Edgeworthii, A. DC... ... „ 357
flava, Br. ... „ 357
glabra, Clarke ... „ 358
grandiflora, Wall. ... „ 358
Griffithii, Hk. f. & T. ... „ 344
hamosa, *Br.* ... „ 360
Hookeri, *Clarke* ... „ 359
Kurzii, *Clarke* ... „ 358
macrophylla, *Wall.* ... „ 358
monophylla, *Clarke*... ... „ 360
Moonii, *Gardn.* ... „ 356
primulacea, *Clarke* ... „ 360
pumila, *D. Don* ... „ 357
urticæfolia, *Ham.* ... „ 358
Walkeri, *Gardn.* ... „ 356
Walkeriæ, Hook. ... „ 356
zeylanica, *Hook.* ... „ 356
sp., Hk. f. & T. ... iv. 349, 352, 358, 359, 360, 361.
Chironia centaurioides, Roxb. iv. 102
trinervis, Linn. ... „ 97
CHIRONIEÆ ... iv. 94
Chisocheton, *Bl.* ... i. 550
? **costatus**, *Hiern* ... „ 552
divergens, Bl. ... „ 551
dysoxylifolius, *Kurz* ... „ 551
erythrocarpus, *Hiern* ... „ 550
fragrans, *Hiern* ... „ 551
glomeratus, *Hiern* ... „ 551
grandiflorus, *Kurz* ... „ 552
holocalyx, *Hiern* ... „ 551
paniculatus, *Hiern* i. 552, 679, 685
penduliflorus, *Planch.* ... i. 550
spicatus, *Hiern* ... „ 550
Chlaotrachelus, vide *Claotrachelus rupestris*, Zoll. ... iii. 234
Chloothamnus chilianthus, Buese ... vii. 416
CHLORANTHACEÆ ... v. 99
Chloranthus, *Sw.* ... v. 100
brachystachyus, *Bl.* ... „ 100
ceylanicus, Miq. ... „ 100
denticulatus, Cord. ... „ 100
elatior, Br. ... „ 100
erectus, Sweet ... „ 100

Chloranthus Vol. Page
grandifolius, *Miq.* ... ... v. 100
inconspicuus, Swartz ... „ 100
indicus, Wight ... ... „ 100
monander, Br. ... ... „ 100
officinalis, *Bl.* ... ... „ 100
CHLORIDEÆ ... ... vii. 6, 283
Chloris, *Sw.* ... ... vii. 289
barbata, *Sw.* ... ... „ 292
caudata, Trin. ... ... „ 291
compressa, DC. ... . „ 291
cryptostachys, Steud. ... „ 291
Cynodon, Trin. ... ... „ 289
decora, Nees ... ... „ 291
decora, Thw. ... ... „ 292
delicatula, *Clarke* ... ... „ 290
digitata, Steud. ... ... „ 290
distachya, Kunth ... ... „ 293
elegans, Kunth ... ... „ 291
filiformis, Poir. ... ... „ 299
incompleta, *Roth* ... ... „ 290
maritima, Trin. ... ... „ 289
meccana, Hochst. & Steud. „ 291
monostachya, Poir. ... ... „ 293
montana, *Roxb.* ... ... „ 292
montana, Griseb. ... ... „ 291
mucronata, Mich. ... ... „ 296
myosuroides, *Hk. f.* ... „ 290
pallida, *Hk. f.* ... ... „ 289
pallida, Link ... ... „ 291
penicillata, Hort. ... ... „ 291
penicillata, Pers. ... ... „ 293
polydactyla, Durand ... „ 291
polystachya, *Roxb.* ... ... „ 292
radiata, Heyne ... ... „ 290
Roxburghiana, Schult. ... „ 292
Roxburghii, Edgew. ... „ 290
tenella, *Roxb.* .. .. „ 290
tetrameris, Trin. ... ... „ 290
tetrapogon, Beauv. ... ... „ 291
tetrastachys, Hack. ... ... „ 291
triangulata, Hochst. ... „ 291
villosa, *Pers.* ... ... „ 291
virgata, *Sw.* ... ... „ 291
Wightiana, *Nees* ... ... „ 293
sp., Wall. ... ... vii. 291, 292, 293
Chlorophytum, *Ker* ... ... vi. 333
abyssinicum, Kotschy & Peyr. ... ... „ 336
acaule, *Baker* ... ... „ 336
anthericoideum, Dalz. ... „ 334
arundinaceum, *Baker* ... „ 333
attenuatum, *Baker* ... ... „ 335
breviscapum, *Dalz.* ... ... „ 333
breviscapum, Thw. ... ... „ 333
falcatum, Baker ... ... „ 336
glaucum, *Dalz.* ... ... „ 334
Heyneanum, *Wall.* ... ... „ 333
Chlorophytum Vol. Page
Heynei, Baker ... ... vi. 333
khasianum, *Hk. f.* ... ... „ 334
laxiflorum, Baker ... ... „ 336
laxum, *Br.* ... ... „ 336
malabaricum, *Baker* ... „ 335
nepalense, Baker ... vi. 334, 335
Nimmonii, Dalz. ... ... vi. 336
Orchidastrum, *Lindl.* ... „ 336
parviflorum, Dalz. ... ... „ 336
tuberosum, *Baker* ... ... „ 334
undulatum, *Wall.* ... ... „ 335
Chloroxylon, *DC.* ... ... i. 569
Dupada, Buch. ... ... „ 528
Swietenia, *DC.* ... ... „ 569
Chondrachne articulata, Br. vi. 684
Chondrilla, *Linn.* ... ... iii. 402
auriculata, Wall. ... ... „ 405
fontinalis, Wall. ... ... „ 410
gracilis, Wall. ... ... „ 411
graminea, *M. Bieb.* ... ... „ 402
hastata, Wall. ... ... „ 408
juncea, Linn. ... ... „ 402
longifolia, Ham. ... ... „ 410
longifolia, Wall. ... ... „ 405
nudicaulis, Linn. ... ... „ 416
pulchra, Lamk. ... ... „ 398
racemosa, Poir. ... ... „ 403
runcinata, Wall. ... ... „ 395
sagittata, Wall. ... ... „ 410
secunda, Royle ... ... „ 416
setulosa, *Clarke* ... ... „ 402
tenuis, Ham. ... ... „ 410
sp. ... ... „ 402
Chondrospermum coriaceum, Wall. ... ... iii. 618
smilacifolium, Wall. ... „ 618
Chonemorpha, *G. Don* ... iii. 661
? *antidysenterica*, G. Don „ 644
? *cristata*, G. Don ... ... „ 664
dichotoma, G. Don ... ... „ 664
? *grandiflora*, G. Don ... „ 661
Griffithii, *Hk. f.* ... ... „ 662
macrophylla, *G. Don* ... „ 661
malabarica, G. Don ... ... „ 662
mollis, Miq. ... ... „ 661
vestita, G. Don ... ... „ 662
Choricarpa aphylla, Boeck. vi. 684
Choriophyllum, *Benth.* ... v. 343
malayanum, *Benth.* ... ... „ 344
Choripetalum, A. DC. ... iii. 515
aurantiacum, A. DC. ... „ 516
undulatum, A. DC. ... ... „ 516
viridiflorum, A. DC. ... „ 516
sp., Griff. ... ... „ 517
Chorispora, *DC.* ... ... i. 166
elegans, Camb. ... ... „ 167
sabulosa, *Camb.* ... ... „ 167

Chorispora Vol. Page
sibirica, *DC.* i. 167
tenella, *DC.* „ 166
Chorizandra pinnata, Wight v. 328
Chotekia (*Chotellia*) *sericea*, Opiz & Corda iv. 639
CHRISTISONIA, *Gardn.* iv. 321
albida, *Thw.* „ 323
aurantiaca, Wight „ 322
bicolor, *Gardn.* „ 322
calcarata, *Wight* „ 322
grandiflora, Gardn. „ 323
Hookeri, *Clarke* „ 321
Lawii, *Wight* „ 322
neilgherrica, *Gardn.* „ 322
pallida, Gardn. „ 322
Stocksii, Hook. „ 322
subacaulis, *Gardn.* „ 321
tricolor, *Gardn.* „ 323
tubulosa, *Benth.* „ 321
? *unicolor*, Gardn. „ 323
Christolea, *Camb.* i. 154
crassifolia, *Camb.* „ 154
Chrozophora, *Neck.* v. 408
Burmanni, Spreng. „ 409
mollissima, Spreng. „ 430
obliqua, *A. Juss.* „ 409
oblongifolia, A. Juss. „ 409
plicata, *A. Juss.* „ 409
plicata, Dalz. „ 410
prostrata, Dalz. „ 410
Rottleri, A. Juss. „ 409
tinctoria, *A. Juss.* „ 408
tinctoria, Muell. „ 409
verbascifolia, Boiss. „ 409
Chrysanthellum, *Rich.* iii. 310
indicum, *DC.* „ 310
Chrysanthemum, *Linn.* iii. 314
? *artemisiæfolium*, Klatt „ 315
Atkinsoni, *Clarke* „ 315
coronarium, Linn. „ 314
cuneatum, Roxb. „ 249
Griffithi, Clarke „ 315
indicum, Linn. „ 314
Richteria, *Benth.* „ 315
Roxburghii, Desf. „ 314
Stoliczkai, *Clarke* „ 314
tibeticum, *Hk. f. & T.* „ 314
Chrysobalanea arborescens, Br. ii. 322
CHRYSOBALANEÆ ii. 307
Chrysobalanus Icaco, Linn. ii. 307
sp., Wall. „ 318
Chrysobaphus Roxburghii, Wall. vi. 95
Chrysocoma purpurea, Forst. iii. 234
violacea, Schum. „ 234
Chrysocyathus, Falc. i. 15
Chrysoglossum, *Bl.* v. 783
Chrysoglossum Vol. Page
assamicum, *Hk. f.* v. 784, vi. 190
erraticum, *Hk. f.* v. 784, vi. 190
maculatum, *Hk. f.* v. 784, 910, vi. 190, 193
villosum, *Bl.* v. 783
Chrysogonum, *Linn.* iii. 302
Arnottianum, *Benth.* „ 303
heterophyllum, *Benth.* „ 303
Chrysophyllum, *Linn.* iii. 535
acuminatum, Roxb. „ 535
? *molle*, Wall. „ 547
Roxburghii, *G. Don* „ 535
sumatranum, Miq. „ 535
Chrysopogon, Hack. vii. 187
aciculatus, Trin. „ 188
Arnottianus, Nees „ 192
asper, Heyne „ 189
ciliolatus, Boiss. „ 193
coeruleus, Duthie „ 193
Esenbeckii, Wight „ 191
fuscus, Trin. „ 185
glabratus, Trin. „ 188
glaucopsis, Duthie „ 179
Gryllus, Trin. „ 188
increscens, Nees „ 193
montanus, Duthie „ 179
montanus, Trin. „ 193
muricatus, Wight „ 242
pictus, Hance „ 179
serrulatus, Str. & Wint. „ 193
serrulatus, Trin. „ 193
subulatus, Trin. „ 188
trivialis, Arn. & Nees „ 188
velutinus, Arn. „ 194
verticillatus, Trin. „ 189
villosulus, Nees „ 179
violascens, Trin. „ 179
Wightianus, Nees „ 191
Wightianus, Thw. „ 192
zeylanicus, Thw. „ 192
sp., Wall. vii. 177, 188, 190, 191, 192, 193, 194, 243.
Chrysosplenium, *Linn.* ii. 400
adoxoides, Maxim. „ 401
alternifolium, *Linn* „ 400
carnosulum, Maxim. „ 401
carnosum, *Hk. f. & T.* „ 400
Griffithii, *Hk. f. & T.* „ 401
lanuginosum, *Hk. f. & T.* „ 401
nepalense, *D. Don* „ 400
sulcatum, Maxim. „ 400
tenellum, *Hk. f. & T.* „ 401
trichospermum, *Edgew.* „ 400
Chrysurus aureus, Beauv. vii. 307
cynosuroides, Pers. „ 307
Chusquea amplopaniculata, Steud. vii. 415

Vol. Page
Cicca albizzioides, Kurz ... v. 289
anomala, Baill. ... ... „ 305
decandra, Blanco ... ... „ 288
disticha, Linn.... ... ... „ 304
Emblica, Kurz ... ... „ 289
Gærtneriana, Thw. ... ... „ 305
Leucopyrus, Kurz ... ... „ 329
macrocarpa, Kurz ... ... „ 290
microcarpa, Benth. ... ... „ 288
obovata, Kurz ... ... „ 328
pentandra, Blanco ... ... „ 328
reticulata, Kurz ... ... „ 288
Cicendia fastigiata, Griseb. iv. 100
hyssopifolia, W. & A. ... „ 101
microphylla, Edgew. ... „ 99
Roxburghii, Griseb. ... ... „ 100
Cicer, *Linn.* ... ... ii. 176
arietinum, *Linn.* ... ... „ 176
Jacquemontii, J. & S. ... „ 176
Lens, Willd. ... ... „ 179
microphyllum, Benth. ... „ 176
numulariæfolium, Lamk... „ 66
soongaricum, *Steph.* ... „ 176
CICHORIACEÆ... ... ... iii. 225, 391
Cichorium, *Linn.* ... ... iii. 391
Cosnia, Ham. ... ... „ 391
Endivia, Linn. ... ... „ 391
Intybus, *Linn.*... ... ... „ 391
Cicuta, *Linn.* ... ... ii. 679
virosa, *Linn.* ... ... „ 679
Cicutaria aquatica, Lamk. ... ii. 679
Cimicifuga, *Linn.* ... ... i. 29
fœtida, *Linn.* ... ... „ 30
frigida, Royle ... ... „ 30
Cinchona excelsa, Roxb. ... iii. 35
gratissima, Wall. ... ... „ 36
succirubra, Pav. ... ... „ 82
thyrsiflora, Roxb. ... ... „ 35
CINCHONEÆ ... ... iii. 18, 34
Cinclidocarpus nitidus, Zoll. & Mor. ... ... ii. 257
Cineraria chinensis, Spreng. iii. 352
repanda, Lour. ... ... „ 352
Cinnamomum, *Bl.* ... ... v. 128
albiflorum, Nees ... ... „ 128
aromaticum, Grah. ... ... „ 132
Bazania, Nees ... ... „ 133
Burmanni, Bl. ... ... „ 136
Camphora, F. Nees ... „ 134
Cassia, *Bl.* ... ... „ 130
Cassia, D. Don ... ... „ 128
Cathia, D. Don... .. v. 136, 142
caudatum, *Nees*... ... ... v. 134
Cecicodaphne, *Meissn.* ... „ 135
citriodorum, *Thw.* ... ... „ 134
dubium, Wight... ... ... „ 132
dulce, Nees ... ... „ 129
Cinnamomum Vol. Page
eucalyptoides, F. Nees ... v. 130
glanduliferum, *Meissn.* ... „ 135
gracile, *Hk. f.* ... ... „ 133
gracile, Miq. ... ... „ 130
Griffithii, Meissn. ... ... „ 130
Heyneanum, *Nees* ... ... „ 136
impressinervium, *Meissn.* „ 129
iners, *Reinw.* ... ... „ 130
iners, Wall. ... ... „ 130
? *iners*, Wight ... ... v. 132, 133
inodorum, Meissn. ... ... v. 135
inunctum, *Meissn.* ... ... „ 135
javanicum, *Bl.* ... ... „ 130
litseæfolium, *Thw.* ... ... „ 133
lucens, Miq. ... ... „ 131
macrocarpum, *Hk. f.* v. 133, 136
malabathrum, Batka ... v. 130
? *malaccense*, Meissn. ... „ 135
mollissimum, *Hk. f.* ... „ 131
multiflorum, *Wight*... ... „ 132
Neesianum, Meissn. ... „ 135
nitidum, *Bl.* ... ... „ 130
obtusifolium, *Nees* ... ... „ 128
ovalifolium, *Wight* ... ... „ 133
Parthenoxylon, *Meissn.* ... „ 135
pauciflorum, *Nees* ... ... „ 129
perpetuo-florens, Burm. ... „ 132
Perrottetii, *Meissn.* ... „ 134
Pseudo-sassafras, Meissn. „ 135
recurvatum, Wight ... ... „ 129
sulphuratum, *Nees* ... ... „ 132
sulphuratum, Kurz ... ... „ 131
Tamala, *Fr. Nees* ... ... „ 128
tavoyanum, *Meissn.* ... „ 131
tomentosum, D. Don v. 136, 142
villosum, Wight ... ... v. 132
vimineum, *Nees* ... ... „ 131
Wightii, *Meissn.* ... ... „ 132
zeylanicum, *Breyn.* ... „ 131
Cionisaccus lanceolatus, Breda vi. 111
Cipadessa, *Bl.* ... ... i. 545
baccifera, Miq. ... ... „ 545
fruticosa, *Bl.* ... ... „ 545
? *subscandens*, Miq.... ... „ 545
Circæa, *Linn.* ... ... ii. 589
alpina, *Linn.* ... ... „ 589
cordata, *Royle* ... ... „ 589
intermedia, Wall. ... ... „ 589
lutetiana, *Linn.* ... ... „ 589
repens, Wall. ... ... „ 589
Circæaster, *Maxim.* ... ... v. 100
agrestis, *Maxim.* ... ... „ 101
Cirrhopetalum, *Lindl.* ... v. 772
acutiflorum, *Hk. f.* ... ... „ 779
albidum, Wight ... ... „ 757
Andersoni, *Hk. f.* v. 777, vi. 190
Andersonii, Kurz ... ... v. 774

Cirrhopetalum Vol. Page
aureum, *Hk. f.* . v. 777, vi. 190
Blepharistes, *Hk. f.* v. 779, vi. 190
bootanense, *Griff.* ... ... v. 775
brevipes, *Hk. f.* v. 777, vi. 190
cæspitosum, *Wall.* ... ... v. 775
caudatum, Wight ... ... „ 773
Collettii, *Hemsl.* ... ... „ 773
concinnum, *Hk. f.* ... ... vi. 190
cornutum, *Lindl.* ... ... v. 774
elatum, *Hk. f.* v. 775, vi. 190
fimbriatum, *Lindl.* ... ... v. 774
Gamblei, *Hk. f.* v. 778, vi. 190
gamosepalum, *Griff.* ... v. 774
grandiflorum, *Wight* ... „ 773
guttulatum, *Hk. f.* ... ... „ 776
lasiochilum, *Hk. f.* ... ... „ 772
longescapum, *Teys. & Binn.* vi. 189
Macraei, *Lindl.* v. 780, vi. 190
Macraei, Wight ... ... v. 777
maculosum, *Lindl.* ... ... „ 776
Mannii, Hk. f. ... ... „ 780
Medusæ, Lindl. ... ... „ 757
merguense, *Hk. f.* ... ... „ 772
nilgherrense, *Wight* ... „ 778
ornatissimum, *Rchb. f.* ... „ 773
parvulum, *Hk. f.* v. 778, vi. 190
picturatum, *G. Lodd* ... v. 774
Pumilio, *Hk. f.* ... ... „ 778
refractum, *Zoll.* ... ... „ 779
retusiusculum, *Rchb. f.* .. „ 776
Roxburghii, *Lindl.* v. 774, vi. 190
simillimum, *Rchb. f.* ... v. 775
tæniophyllum, *Hk. f.* ... „ 780
Thomsoni, *Hk. f.* v. 778, vi. 190
Thwaitesii, *Rchb. f.* ... ... v. 777
tripudians, Par. & Rchb. f. „ 779
vaginatum, *Lindl.* v. 773, vi. 189
viridiflorum, *Hk. f.* v. 779, vi. 190
Walkerianum, Wight ... v. 780
Wallichii, *Lindl.* ... ... „ 776
? *Wallichii*, Grah. ... ... „ 774
Wallichii, Lindl. ... ... „ 779
Wightii, *Thw.* ... ... „ 777
Cirsium argyracanthum, DC. iii. 362
argyracanthum, Wight ... „ 364
arvense, Scop. ... ... „ 362
heteromallum, Spreng. ... „ 373
involucratum, DC. ... ... „ 362
lyratum, Bunge ... ... „ 373
macracanthum, Sch. Bip. „ 364
nepalense, DC. ... ... „ 364
sinensis, Clarke... ... ... „ 364
Stocksii, Boiss. ... ... „ 362
Wallichii, DC. ... ... iii. 363, 364
sp., Hk. f. & T. ... ... iii. 360
CISSAMPELIDEÆ ... ... i. 95
Cissampelopsis volubilis, Miq. iii. 351

Vol. Page
Cissampelos, *Linn.* ... ... i. 103
barbata, Wall. ... ... „ 104
Caapeba, Linn. ... ... „ 104
convolvulacea, Willd. ... „ 104
delicatula, Miers ... ... „ 104
discolor, Ham. ... ... „ 104
discolor, DC. ... ... „ 103
discolor, Wall. ... ... „ 104
diversa, Miers ... ... „ 104
elata, Miers ... ... „ 104
eriantha, Miers ... ... „ 104
glabra, Roxb. ... ... „ 103
grallatoria, Miers ... ... „ 104
hernandifolia, Wall. ... „ 104
hernandifolia, Willd. ... „ 103
hexandra, Roxb. ... ... „ 103
hirsuta, Buch. ... ... „ 104
mauritiana, Wall. ... ... „ 102
obtecta, Wall. ... ... „ 104
officinarum, Pluk., *vide* *Cocculus*... ... ... „ 105
oleracea, Wall. ... ... „ 96
orbiculata, Buch. ... ... „ 104
ovata, Poir. ... ... „ 105
Pareira, *Linn.* ... ... „ 103
Plukenetii, DC., *vide* *Cocculus*... ... ... „ 105
sagittata, Ham. ... ... „ 96
subpeltata, Thw. ... ... „ 104
Wightianus, Wall., *vide* *Cocculus*... ... ... „ 105
Cissus acida, Wall. ... ... i. 654
acida, Roxb. ... ... „ 654
acuminata, Thw. ... ... „ 648
acutifolia, Poir. ... ... „ 663
adnata, Roxb. ... ... „ 649
angulata, Lamk. ... ... „ 649
angustifolia, Roxb. ... ... „ 654
aquosa, Wall. ... ... „ 648
arborea, Forsk. ... ... iii. 619
auriculata, Roxb. ... ... i. 654
cantoniensis, Hk. & Arn. „ 663
capreolata, Royle ... ... „ 659
carnosa, Roxb. ... ... „ 654
cinerea, Lamk. ... ... „ 654
cordata, Roxb. ... ... i. 646, 648
cordata, Wall. ... ... i. 649
crenata, Vahl ... ... „ 654
cymosa, Wall. ... ... „ 660
discolor, Bl. ... ... „ 647
diversifolia, Walp ... ... „ 663
edulis, Dalz. ... ... „ 645
elongata, Roxb. ... ... „ 658
feminea, Roxb. ... i. 655, 660
Gardneri, Thw. ... ... i. 656
glauca, Roxb. ... ... „ 648
glauca, Thw. ... ... „ 647

Cissus Vol. Page
glyptocarpa, Thw. ... ... v. 645
hastata, Miq. ... ... ,, 645
heptaphylla, Retz. ... ... ,, 662
heterophylla, Herb. Madr. ,, 653
himalayana, Walp ... ... ,, 656
involucrata, Spreng. ... ,, 664
japonica, Willd. ... ... ,, 660
Kleinii, Wall. ... ... ,, 649
lanceolaria, Roxb. ... ... ,, 660
latifolia, Vahl ... ... ,, 649
lonchiphylla, Thw. ... ... ,, 646
muricata, Dalz. & Gibs. ... ,, 660
napaulensis, DC. ... ... ,, 659
obtusifolia, Lamk. ... ... ,, 654
pedata, Lamk. ... ... ,, 662
pentagona, Roxb. ... ... ,, 646
pentaphylla, Herb. Madr. ,, 649
? *porphyrophylla*, Lindl.... v. 96
purpurea, Roxb. ... ... i. 648
quadrangularis, Linn. ... ,, 645
repanda, Vahl ... ... ,, 648
repens, Lamk. ... ... ,, 647
repens, Thw. ... ... ,, 648
reticulata, Thw. ... ... ,, 655
riparia, Wall. ... ... ,, 649
rotundata, Heyne ... ... ,, 647
serratifolia, Rottl. ... ... ,, 662
serrulata, Roxb. ... ... ,, 659
setosa, Roxb. ... ... ,, 654
spicifera, Griff. ... ... ,, 650
tenuifolia, Heyne ... ... ,, 660
trifoliata, Ham. ... ... ,, 654
trilobata, Lamk. ... ... ,, 653
truncata, Wall. ... ... ,, 660
tuberculata, Bl. ... ... ,, 656
velutinus, Lindl. ... ... ,, 647
vitiginea, Linn. ... ... ,, 649
vitiginea, Roxb. ... i. 648, 651
Wallichiana, Turcz ... ... i. 663
Cistanche, *Hoffm. & Link* iv. 323
lutea, Wight ... ... ,, 324
tubulosa, *Wight* ... ... ,, 324
Cistella cernua, Bl. ... ... vi. 18
Citheris, *vide Cytheris.*
Citrullus, *Schrader* ... ... ii. 620
Colocynthis, *Schrad.* ... ,, 620
fistulosus, Stocks ... ... ,, 621
vulgaris, *Schrad.* ... ... ,, 621
Citrus, *Linn.* ... ... i. 514
acida, Roxb. ... ... ,, 515
Aurantium, *Linn.* ... ... ,, 515
buxifolia, Poir. ... ... ,, 515
decumana, *Linn.* ... ... ,, 516
Hystrix, *DC.* ... ... ,, 515
inermis, Roxb. ... ... ,, 514
japonica, Thunb. ... ... ,, 514
latipes, Hk. f. & T. ... ,, 515

Citrus Vol. Page
Limetta, DC. ... ... ii. 515
Limetta, Risso ... ... ,, 515
Limonellus, Wall. ... ... ,, 515
Limonum, Wall. ... ... ,, 515
Lumia, Risso ... ... ,, 515
medica, *Linn.* ... ... ,, 514
medica, Willd. ... ... ,, 515
Papeda, Miq. ... ... ,, 515
scandens, Griff. ... ... ,, 510
vulgaris, Risso ... ... ,, 515
Claderia, *Hk. f.* ... v. 810, vi. 178
viridiflora, *Hk. f.* v. 810, vi. 191
Cladium, *Br.* ... ... vi. 673
germanicum, Schrad. ... ,, 674
glomeratum, *Br.* ... ... ,, 675
jamaicense, Crantz ... ... ,, 674
Maingayi, *Clarke* ... ... ,, 674
Mariscus, *Br.* ... ... ,, 673
riparium, *Benth.* ... ... ,, 674
undulatum, *Thw.* ... ... ,, 674
Cladosperma, Griff. ... ... vi. 411
Cladostachys alternifolia, Sweet ... ... iv. 718
frutescens, D. Don ... ... ,, 714
muricata, Moq. ... ... ,, 718
Claotrachelus (*Chlaotrachelus*) *rupestris*, Zoll. ... ... iii. 234
Claoxylon, *A. Juss.* ... ... v. 410
anomalum, *Hk. f.* ... ... ,, 412
Beddomei, *Hk. f.* ... ... ,, 413
digynum, Wight ... ... ,, 453
hirsutum, *Hk. f.* ... ... ,, 413
indicum, *Hassk.* ... ... ,, 410
khasianum, *Hk. f.* ... ... ,, 411
leucocarpum, *Kurz* ... ... ,, 413
longifolium, *Muell.* ... ,, 411
longifolium, Baill. ... ... ,, 412
longipetiolatum, *Kurz* ... ,, 413
macrophyllum, Hassk. ... ,, 410
Mercurialis, Thw. ... ... ,, 412
muricatum, Wight ... ... ,, 436
oligandrum, *Muell.* ... ... ,, 412
parviflorum, Hook. & Arn. ,, 410
spiciflorum, Baill.. ... ... ,, 410
Wallichianum, *Muell.* ... ,, 411
Wightii, *Hk. f.* ... ... ,, 413
sp. v. 13, 14, 15, ... ,, 414
sp., Hk. f. & T. ... ... v. 438
Clarkella, *Hk. f.* ... ... iii. 46
nana, *Hk. f.* ... ... ,, 46
Clausena, *Burm.* ... ... i. 503
excavata, *Burm.* ... ... ,, 504
heptaphylla, *W. & A.* ... ,, 504
indica, *Oliv.* ... ... ,, 505
macrophylla, *Hk. f.* ... ,, 504
nana, W. & A. ... ... ,, 506
pentaphylla, *DC.* ... ... ,, 503

Clausena ... Vol. Page
pubescens, W. & A. ... ... i. 506
simplicifolia, Dalz. ... ... „ 498
suffruticosa, *W. & A.* ... „ 506
Wallichii, *Oliv.* ... ... „ 505
Wampi, *Oliv.* ... ... „ 505
Willdenovii, *W. & A.* ... „ 506
Clavimyrtus lineata, Bl. ... ii. 487
ramosissima, Bl. ... ... „ 480
virens, Bl. ... ... „ 480
Clavulium pedunculosum, Desv. ... ... ii. 84
Cleghornia acuminata, Wight iii. 663
cymosa, Wight ... . „ 663
Cleidion, *Bl.* ... ... v. 444
javanicum, *Bl.* ... ... „ 444
nitidum, *Thw.* ... ... „ 444
Cleisostoma, *Bl.* ... ... vi. 71, 179
acaule, Lindl. ... ... vi. 62
andamanicum, *Hk. f.* ... „ 71
bicuspidatum, *Hk. f.* ... „ 75
bipunctatum, *Hk. f.* ... „ 73
brevipes, *Hk. f.* ... ... „ 73
callosum, Rchb. f. ... ... „ 74
crassifolium, *Lindl.* ... „ 72
Dawsonianum, Rchb. f. ... „ 43
decipiens, *Lindl.* ... ... „ 75
discolor, *Lindl.* ... ... „ 75
fuscum, Lindl. ... ... „ 71
galeatum, Thw. ... ... „ 71
lanatum, Lindl. ... ... „ 60
latifolium, *Lindl.* ... ... „ 71
loratum, *Rchb. f.* ... ... „ 76
maculosum, *Lindl.* ... ... „ 71
maculosum, Thw. ... ... „ 75
Mannii, *Rchb. f.* ... ... „ 74
ramosum, *Hk. f.* ... ... „ 72
spicatum, *Lindl.* ... ... „ 72
? *subulatum*, Bl. ... ... „ 70
tenerum, *Hk. f.* ... ... „ 73
Thwaitesianum, Trim. ... „ 75
undulatum, *Rchb. f.* ... „ 74
uteriferum, *Hk. f.* ... ... „ 74
Wendlandorum, *Rchb. f.* „ 74
Cleistachne, *Benth.* ... ... vii. 162
sorghoides, Benth. ... ... „ 163
Stocksii, *Hk. f.* ... ... „ 162
Cleistanthium nepalense, Kunze ... ... iii. 390
Cleistanthus, *Hk. f.* ... ... v. 274
acuminatus, *Muell.* ... ... „ 276
chartaceus, *Muell.* ... ... „ 275
chartaceus, Muell. ... iii. 281, 282
collinus, *Benth.* ... V ~~iii.~~ 274
decurrens, *Hk. f.* ... ... „ 278
ellipticus, *Hk. f.* ... ... „ 281
ferrugineus, *Muell.* ... „ 280
gracilis, *Hk. f.* ... ... „ 277

Cleistanthus Vol. Page
Helferi, *Hk. f.* ... ... iii. 280
heterophyllus, *Hk. f.* ... „ 276
hirsutulus, *Hk. f.* ... ... „ 278
lævis, *Hk. f.* ... ... „ 277
lanceolatus, Hk. f. ... ... „ 275
lancifolius, *Hk. f.* ... ... „ 277
macrophyllus, *Hk. f.* ... „ 278
Maingayi, *Hk. f.* ... ... „ 280
malabaricus, *Muell.* v. 274, 276
malaccensis, *Hk. f.* ... ... v. 277
membranaceus, *Hk. f.* ... „ 278
myrianthus, *Kurz* ... ... „ 275
nitidus, *Hk. f.* ... ... „ 280
oblongifolius, Brand. ... „ 275
oblongifolius, Muell. v. 279, 282
pallidus, *Muell.* ... ... v. 279
parvifolius, *Hk. f.* ... ... „ 281
patulus, *Muell.* ... ... „ 279
pedicellatus, *Hk. f.* ... ... „ 281
podocarpus, *Hk. f.* ... ... „ 281
robustus, *Muell.* ... ... „ 279
stenophyllus, *Kurz* ... „ 275
stipularis, *Muell.* ... ... „ 282
stipulatus, *Hk. f.* ... ... „ 281
subglaucus, Thw. ... ... „ 279
sp., Wall. ... ... „ 282
CLEMATIDEÆ... ... ... i. 1
Clematis, *Linn.* ... ... i. 2
acuminata, *DC.* ... ... „ 5
acutangula, *Hk. f. & T.* ... „ 3
albida, Klotz. ... ... „ 5
amplexicaulis, Edgew. ... „ 6
anemoniflora, D. Don ... „ 2
apiculata, *Hk. f. & T.* ... „ 4
barbellata, *Edgew.* ... ... „ 3
Buchananiana, *DC.* ... „ 6
Buchananiana, Wall. ... „ 6
Cadmia, *Ham.* ... .. „ 2
cana, Wall. ... ... „ 4
comosa, DC. ... ... „ 6
connata, *DC.* ... ... „ 6
glauca, Willd. ... ... „ 5
globosa, Royle ... ... „ 5
Gouriana, *Roxb.* ... ... „ 4
gracilis, Edgew. ... ... „ 6
grata, *Wall.* ... ... „ 3
graveolens, *Lindl.* ... ... „ 4
graveolens, Hook. ... ... „ 5
grewiæflora, *DC.* ... ... „ 6
grossa, Wall. ... ... „ 6
hedysarifolia, *DC.* ... ... „ 4
ispahanica, Boiss. ... ... „ 5
javana, DC. ... ... „ 4
loasæfolia, DC. ... ... „ 6
loasifolia, D. Don ... ... „ 6
longicaudata, Ledeb. ... „ 5
montana, *Ham.* ... ... „ 2

Clematis Vol. Page
montana, D. Don ... ... i. 2
Munroana, Wight ... ... „ 3
napaulensis, *DC.* ... ... „ 2
nepaulensis, Royle ... ... „ 3
nutans, *Royle* ... ... „ 5
orientalis, *Linn.* ... ... „ 5
parvifolia, Edgew. ... ... „ 5
parvifolia, Hk. f. & T. ... „ 4
puberula, *Hk. f. & T.* ... „ 4
punduana, Wall. ... ... „ 2
scabiosæfolia, DC. ... ... „ 6
smilacifolia, *Wall.* ... ... „ 3
smilacina, Bl. ... ... „ 3
subpeltata, Wall. ... ... „ 3
sulcata, Wall. ... ... „ 2
tenuifolia, Royle ... ... „ 5
tortuosa, Wall. ... ... „ 6
triloba, *Heyne* ... ... „ 3
velutina, Edgew. ... ... „ 6
venosa, Royle ... ... „ 6
villosa, DC. ... ... „ 6
vitifolia, Wall. ... ... „ 6
Wightiana, *Wall.* ... ... „ 5
Cleome, *Linn.* ... ... i. 168
angustifolia, A. Rich. ... „ 169
aspera, *Kœnig* ... ... „ 169
brachycarpa, *Vahl* .. ... „ 169
Burmanni, *W. & A.* ... „ 170
Chelidonii, *Linn.* ... ... „ 170
ciliata, Sch. & Th. ... „ 170
cordata, DC. ... ... „ 168
diffusa, Roxb. ... ... „ 169
diversifolia, Hochst. ... „ 169
felina, *Linn.* ... ... „ 170
fruticosa, Linn. ... ... „ 172
gracilis, Edgew. ... ... „ 168
heptaphylla, Linn. ... ... „ 168
icosandra, Linn. ... ... „ 170
monophylla, *Linn.* ... ... „ 168
monophylla, Law ... ... „ 169
Noëana (*Noreana*), Boiss. „ 168
papillosa, *Steud.* ... ... „ 168
pentaphylla, Linn. ... ... „ 171
quinquenervia, *DC.* ... „ 168
Ruta, Camb. ... ... „ 169
simplicifolia, *Hk. f. & T.* „ 169
Stocksiana, *Boiss.* ... ... „ 169
tenella, *Linn.* ... ... „ 169
Vahliana, Fres. ... ... „ 169
viscosa, *Linn.* ... ... „ 170
CLEOMEÆ ... ... i. 168
Clerodendron, *Linn.* ... ... iv. 589
aculeatum, Linn. ... ... „ 589
acuminatum, Wall. ... ... „ 589
bracteatum, Wall. ... ... „ 593
Buchanani, Roxb. ... ... „ 596
Buchanani, Wall. ... ... „ 596

Clerodendron Vol. Page
calamitosum, *Linn.* ... ... iv. 591
calycinum, Turcz ... ... „ 594
canescens, Wall. ... ... „ 589
castanæfolium, Klotz. ... „ 594
Colebrookianum, *Walp.* „ 594
cordatum, D. Don ... ... „ 594
coromandelianum, Spreng. „ 596
cuneatum, Turcz. ... ... „ 592
deflexum, *Wall.* ... ... „ 593
dentatum, Wall. ... ... „ 593
disparifolium, *Bl.* ... ... „ 589
divaricatum, Jack ... ... „ 592
farinosum, Wall. ... ... „ 592
ferrugineum, Turcz. ... ... „ 595
fœtidum, D. Don ... iv. 596, 597
fortunatum, Linn. ... ... iv. 596
fortunatum, Wall. ... ... „ 596
fragrans, Vent. ... ... „ 589
glandulosum, Wall. ... ... „ 594
gratum, Kurz ... ... „ 597
gratum, Wall. ... ... „ 597
Griffithianum, *Clarke* ... „ 590
hastatum, *Lindl.* ... ... „ 595
herbaceum, Wall. ... ... „ 592
inerme, *Gærtn.* ... ... „ 589
inerme, Benth. ... . „ 589
infortunatum, *Gærtn.* ... „ 594
Jackianum, Wall. ... ... „ 590
javanicum, Walp. ... ... „ 592
lasiocephalum, *Clarke* ... „ 594
Leucosceptrum, D. Don ... „ 699
Linnæi, Thw. ... ... „ 598
Lobbii, *Clarke* ... ... „ 590
macrophyllum, Sims ... „ 592
macrostachyum, *Turcz.* ... „ 591
molle, Jack ... ... „ 595
neriifolium, *Wall.* ... ... „ 589
nutans, *Wall.* ... ... „ 591
ornatum, Wall. ... ... „ 592
ovatum, Poir. ... ... „ 596
paniculatum, *Linn.* ... ... „ 593
penduliflorum, *Wall.* ... „ 591
phlomoides, *Linn. f.* ... „ 590
pyramidale, Andr. ... ... „ 593
sagittatum, Wall. ... ... „ 596
semiserratum, Wall.... ... „ 595
sericeum, Wall. ... ... „ 596
sericeum, Wall. ... ... i. 419
serratum, *Spreng.* ... ... iv. 592
Siphonanthus, *Br.* ... ... „ 595
splendidum, Wall. ... ... „ 593
squamatum, *Vahl* ... ... „ 593
ternifolium, D. Don ... ... „ 592
? *trichotomum*, Wall. ... „ 595
velutinum, Wall. ... ... „ 595
venosum, *Wall.* ... ... „ 592
vertillatum, D. Don ... ... „ 595

Clerodendron Vol. Page
villosum, *Bl.* ... ... iv. 595
viscosum, Vent. ... ... „ 594
sp., Griff. ... ... „ 593
sp., Hk. f. & T. ... iv. 580, 591, 592
Clethropsis nepalensis, Spach v. 600
nitida, Spach ... ... „ 600
Cleyera, *DC.* ... ... i. 283
emarginata, Gardn. ... ... „ 281
grandiflora, *Hk. f. & T.* ... „ 284
grandiflora, Chois. ... ... „ 284
grandiflora, Wall. i. 281, 282, 284
gymnanthera, W. & A. ... i. 281
japonica, Sieb. & Zucc. .. „ 284
japonica, Thunb. ... ... „ 280
lasiopetala, Wight ... ... „ 283
Lushia, G. Don ... ... „ 284
ochnacea, *DC.* ... ... „ 283
ochnoides, G. Don ... ... „ 284
pentapetala, Spreng. ... „ 287
Wallichiana, Sieb. & Zucc. „ 284
Climacandra littoralis, Kurz iii. 530
multiflora, Miq. ... ... „ 530
obovata, Miq. ... ... „ 530
Clinacanthus, *Nees* ... ... iv. 524
Burmanni, *Nees* ... ... „ 524
Clinogyne, *Salisb.* ... ... vi. 257
dichotoma, *Salisb.* ... ... „ 258
grandis, *Benth.* ... ... „ 258
virgata, *Benth.* ... ... „ 258
Clinopodium longicaule, Bth. iv. 651
repens, Roxb. ... ... „ 651
vulgare, Linn. ... ... „ 650
Clintonia, *Rafin.* ... ... vi. 361
alpina, *Kunth* ... ... „ 361
udensis, Fisch. & Mey. ... „ 361
Clitoria, *Linn.* ... ... ii. 208
acuminata, Grah. ... ... „ 208
biflora, *Dalz.* ... ... „ 208
cajanæfolia, *Benth.* ... ... „ 209
Grahami, Steud. ... ... „ 208
macrophylla, *Wall.* ... „ 209
mariana, *Linn.* ... ... „ 208
mexicana, Link. ... ... „ 208
pilosula, Wall. ... ... „ 208
Ternatea, *Linn.* ... ... „ 208
Cluytia androgyna, Linn. ... v. 332
collina, Roxb. ... ... „ 275
montana, Roxb. ... ... „ 269
oblongifolia, Roxb. ... ... „ 275
patula, Roxb. ... ... „ 279
patula, Wight ... ... „ 275
retusa, Linn. ... ... „ 268
retusa, Moon ... ... „ 269
retusa, Wight ... ... „ 275
scandens, Roxb. ... ... „ 270
semperflorens, Roxb. ... „ 397
semperflorens, Wall. ... ... „ 418
Cluytia Vol. Page
spinosa, Willd. ... ... v. 268
stipularis, Linn. ... ... „ 270
sp., Wall. ... ... „ 269
Clypea Burmanni, W. & A. i. 104
hernandifolia, W. & A. ... „ 103
Wightii, Arn. ... ... „ 103
Cnemidia angulosa, Lindl. vi. 92
bambusæfolia, Thw. ... „ 94
curculigoides, Thw., vide *Tropidia* ... ... „ 94
semilibera, Lindl. ... ... „ 92
Cnemidostachys Chamælea, Spreng. ... ... v. 475
linearifolia, Miq. ... ... „ 475
Cnesmone, *Bl.* ... ... v. 466
javanica, *Bl.* ... ... „ 466
CNESTIDEÆ ... ... ii. 46
Cnestis, *Juss.* ... ... ii. 54
acuminata, Wall. ... ... „ 48
flaminea, Griff. ... ... „ 54
foliolosa, Planch. ... ... „ 54
ignea, Planch. ... ... „ 54
monadelpha, Roxb. ... ... „ 47
platantha, Griff. ... ... „ 54
ramiflora, *Griff.* ... ... „ 54
stenopetala, Griff. ... ... „ 49
vestita, Wall. ... ... „ 47
Cnicus, *Linn* ... ... iii. 362
angustifolius, Wall. ... ... „ 382
arachnoides, Wall. ... ... „ 364
argyracanthus, *Clarke* ... „ 362
arvensis, *Hoffm.* ... ... „ 362
candicans, Wall. ... iii. 362, 373
carlinoides, Case. ... ... iii. 363
carthamoides, Wall. ... ... „ 373
cernuus, Wall. ... ... „ 364
eriophoroides, *Hk. f.* ... „ 363
eriophorus, Hk. f. & T. ... „ 363
Falconeri, *Hk. f.* ... ... „ 363
Griffithii, *Hk. f.* ... ... „ 363
horridus, Clarke ... ... „ 363
involucratus, *Wall.* ... „ 362
niveus, Wall. ... ... „ 375
sinensis, *Clarke* ... ... „ 364
Verutus, D. Don ... ... „ 363
Wallichii, *Hk. f.* ... ... „ 363
Wallichii, Clarke ... ... „ 364
Cnidium cuneatum, Ledeb. ii. 704
diffusum, DC. ... ... „ 693
Cobamba dichotoma, Blanco iv. 103
Cobresia laxa, Nees ... ... vi. 698
Coccinia indica, W. & A. ... ii. 621
Wightiana, Roem. ... ... „ 621
Coccoceras, *Miq.* ... ... v. 424
muticum, *Muell.* ... ... „ 424
pedicellatum, Hk. f. ... „ 424
plicatum, *Muell.* ... ... „ 424

Vol. Page
Coccoloba crispata, Ham. ... v. 45
crispatum, Roxb. ... „ 52
Totnea, Ham. ... „ 50
COCCULEÆ ... i. 95
Cocculus, *DC.* ... i. 101
acuminatus, DC. ... „ 99
Aristolochiæ, DC. ... „ 101
Blumeanus, Wall. ... „ 99
Burmanni, DC. ... „ 104
calophyllus, Wall. ... „ 578
convolvulaceus, DC. ... „ 97
cordifolius, DC. ... „ 97
crispus, DC. ... „ 96
cuspidatus, Wall. ... „ 100
Fibraurea, DC. ... „ 98
Finlaysonianus, Wall. ... „ 103
glaber, W. & A. ... „ 102
hastatus, DC. ... „ 101
incanus, Colebr. ... „ 102
lacunosus, DC. ... „ 98
lævis, Wall. ... „ 102
laurifolius, *DC.* ... „ 101
Leæba, *DC.* ... „ 102
longa, vide *Stephania* ... „ 103
lucidus, Teysm. & Binn. ... „ 106
macrocarpus, *W. & A.* ... „ 101
malabaricus, DC. ... „ 96
membranaceus, Wall. ... „ 104
mollis, *Wall.* ... „ 102
oblongus, Wall. ... „ 100
officinarum, Pluk. ... „ 105
orbiculatus, DC. ... „ 104
peltatus, DC. ... „ 104
petiolaris, Wall. ... „ 97
planiflorus, Wall. (error for *pleniflorus*) ... „ 106
polycarpus, Wall. ... „ 99
populifolius, DC. ... „ 98
radiatus, DC. ... „ 99
recisus, Miers ... „ 102
Roxburghianus, Wall. ... „ 103
sepium, Colebr. ... „ 101
suberosus, DC. ... „ 98
tomentosus, Colebr. ... „ 96
triandrus, Colebr. ... „ 100
velutinus, Wall. ... „ 100
verrucosus, Wall. ... i. 96, 97
villosus, *DC.* ... i. 101
villosus, Wall. ... „ 104
Wightianus, Wall. (*lapsu Cissampelos*) ... „ 105
Cochlearia, *Linn.* ... i. 145
altaica ... „ 145
alyssoides, DC. ... „ 145
flava, *Ham.* ... „ 145
himalaica, *Hk. f. & T.* ... „ 145
scapiflora, *Hk. f. & T.* ... „ 145
Cochlianthus, *Benth.* ... ii. 192
gracilis, *Benth.* ... „ 193
Cochlospermum, *Kunth* ... i. 189
Gossypium, *DC.* ... „ 190
COCOINEÆ ... vi. 405
Cocos, *Linn.* ... vi. 482
nana, Griff. ... „ 483
nucifera, *Linn.* ... „ 482
Codariocalyx conicus, Hassk. ii. 175
gyrans, Hassk. ... „ 174
gyroides, Hassk. ... „ 175
Codiæum, *Juss.* ... v. 399
andamanicum, Kurz ... „ 403
? *lutescens*, Kurz ... „ 477
pictum, Hook. ... „ 399
umbellatum, Muell. ... „ 402
variegatum, *Bl.* ... „ 399
Codonacanthus, *Nees* ... iv. 500
acuminatus, Nees ... „ 501
pauciflorus, *Nees* ... „ 500
Codonopsis, *Wall.* ... iii. 430
affinis, *Hk. f. & T.* ... „ 431
albiflora, Griff. ... „ 436
Benthami, *Hk. f. & T.* ... „ 432
celebica, Miq. ... „ 436
clematidea, Schrenck ... „ 433
cordata, Hassk. ... „ 436
fœtens, *Hk. f. & T.* ... „ 433
gracilis, Hk. f. ... „ 430
Griffithii, *Clarke* ... „ 431
inflata, Hk. f. ... „ 436
leucocarpa, Miq. ... „ 436
ovata, *Benth.* ... „ 433
parviflora, Wall. ... „ 436
purpurea, *Wall.* ... „ 431
rotundifolia, *Benth.* ... „ 432
subsimplex. *Hk. f. & T.* ... „ 432
thalictrifolia, *Wall.* ... iii. 430, 432
truncata, Wall. ... iii. 436
viridis, *Wall.* ... „ 431
sp., Griff. ... iii. 431, 435
Coelachne, *Br.* ... vii. 270
brachiata, Munro ... „ 271
brachiata, Trim. ... „ 271
infirma, Buese ... „ 271
madagascariensis, Baker ... „ 271
perpusilla, Thw. ... „ 271
pulchella, *Br.* ... „ 270
pulchella, Thw. ... „ 271
simpliciuscula, Munro ... „ 271
Coelachyrum, *Nees* ... vii. 328, 421
Coelarthron, *Hk. f.* ... vii. 163, 421
Brandisii, *Hk. f.* ... vii. 164
Cœlodepas, *Hassk.* ... v. 419
calycinum, *Bedd.* ... „ 419
ferrugineum, *Hk. f.* ... „ 420
? longifolium, *Hk. f.* ... „ 420

Cœlodepas Vol. Page
Wallichianum, *Benth.* v. 419
Cœlodiscus, *Baill.* v. 425
eriocarpoides, Kurz „ 434
glabriusculus, *Kurz* „ 426
hirsutulus, *Kurz* „ 426
lappaceus, *Kurz* „ 425
longipes, *Kurz* „ 426
montanus, *Muell.* „ 425
speciosus, *Muell.* „ 426
Thunbergianus, *Muell.* „ 427
Cœloglossum acuminatum, Lindl. vi. 163
brevifolium, Lindl. vi. 157, 166
cernuum, Rchb. f. vi. 156
densum, Lindl. „ 156
lacertiferum, Lindl. „ 163
luteum, Dalz. „ 150
Mannii, Rchb. f. „ 163
peristyloides, Rchb. f. „ 156
secundum, Lindl. „ 160
Cœlogyne, *Lindl.* v. 828
alba, Rchb. f. „ 843
anceps, *Hk. f.* v. 840, vi. 194
angustifolia, A. Rich. v. 835
angustifolia, Wight „ 833
apiculata, Par. & Rchb. f. „ 783
Arthuriana, Rchb. f. vi. 194
articulata, Rchb. f. v. 844
asperata, *Lindl.* v. 835, vi. 194
assamica, Lindl. v. 833
barbata, *Griff.* v. 839, vi. 194
birmanica, Rchb. f. (*lapsu Pleione*) v. 840, vi. 194
brachyptera, *Rchb. f.* v. 842
breviscapa, *Lindl.* „ 833
brumea, Lindl. „ 833
calceata, Rchb. f. „ 846
candida, Lindl. „ 841
carnea, *Hk. f.* v. 838, vi. 194
caulescens, *Griff.* v. 842
conferta, Par. & Rchb. f. „ 831
Convallariæ, Rchb. f. „ 846
corniculata, *Rchb. f.* „ 843
coronaria, Lindl. „ 828
corrugata, *Wight* „ 835
corymbosa, *Lindl.* v. 831, vi. 194
cristata, *Lindl.* v. 829, vi. 193
Cumingii, *Lindl.* v. 834
cycnoches, *Par. & Rchb. f.* „ 834, vi. 194
elata, *Lindl.* v. 838, vi. 194
fimbriata, *Lindl.* v. 836
fimbriata, Lindl. „ 836
flaccida, *Lindl.* „ 829
flavida, *Wall.* „ 839
flavida, Hk. f. „ 839
fuliginosa, *Lindl.* „ 836
Cœlogyne Vol. Page
fusca, Rchb. f. v. 844
fuscescens, *Lindl.* „ 833
fuscescens, Wall. „ 830
Gardneriana, *Lindl.* v. 828, vi. 193
glandulosa, *Lindl.* v. 835
Gowerі, *Rchb. f.* „ 843
graminifolia, *Par. & Rchb. f.* „ 831
Griffithii, *Hk. f.* v. 838, vi. 194
Hookeriana, *Lindl.* v. 842, vi. 194
humilis, *Lindl.* v. 840, vi. 194
Hüttneriana, *Rchb. f.* v. 830
imbricata, Rchb. f. „ 846
khasiana, Rchb. f. „ 844
lactea, *Rchb. f.* „ 843
lagenaria, *Lindl.* v. 841, vi. 194
lentiginosa, *Lindl.* v. 830, vi. 193
longibractata, *Hk. f.* vi. 194
longipes, *Lindl.* v. 839
Lowii, Lindl. „ 836
? *lutea*, Par. „ 843
macrobulbon, *Hk. f.* „ 830
maculata, *Lindl.* v. 841, vi. 194
Maingayi, *Hk. f.* v. 831, vi. 194
Massangeana, *Rchb. f.* v. 830, vi. 193
micrantha, *Lindl.* v. 836, vi. 194
nervosa, A. Rich. v. 835
nervosa, Wight „ 835
nitida, *Lindl.* v. 837, vi. 187, 194
occultata, *Hk. f.* v. 832, vi. 194
ocellata, Lindl. v. 837, vi. 194
ochracea, *Lindl.* v. 831
odoratissima, *Lindl.* „ 834
ovalis, *Lindl.* „ 836
pallida, Rchb. f. „ 846
pandurata, *Lindl.* v. 835, vi. 194
papagena, Rchb. f. v. 836
Parishii, *Hook.* „ 837
parviflora, Lindl. „ 783
? *pilosissima*, Planch. „ 836
plantaginea, *Lindl.* „ 843
porrecta, Rchb. f. „ 844
præcox, *Lindl.* v. 840, vi. 194
prolifera, *Lindl.* v. 838
punctulata, Lindl. „ 837
? purpurascens, *Hk. f.* „ 842, vi. 195
recurva, Rchb. f. v. 845
Reichenbachiana, *T. Moore* „ 841, vi. 194
rigida, *Par. & Rchb. f.* v. 839
Rossiana, *Rchb. f.* v. 843, vi. 193, 195
rubra, Walp v. 847
salmonicolor, Rchb. f. vi. 194
Schilleriana, *Rchb. f.* v. 834, vi. 194
speciosa, *Lindl.* v. 834, vi. 194
stenochila, *Hk. f.* v. 837, vi. 194

Cœlogyne Vol. Page
suaveolens, *Hk. f.* v. 832
sulfurea, *Rchb. f.* ,, 833
testacea, *Lindl.* ,, 829
tomentosa, *Lindl.* v. 830, vi. 193
Treutleri, *Hk. f.* v. 837, vi. 194
trifida, Rchb. f. v. 835
trinervis, *Lindl.* ,, 842
? *triplicatula*, Rchb. f. ,, 836
trisaccata, Griff. ,, 829
undulata, Wall. ,, 832
undulata, Walp ,, 847
? uniflora, *Lindl.* ,, 842
ustulata, *Par. & Rchb. f.* ,, 840
viscosa, *Rchb. f.* ,, 832
Wallichiana, Lindl. ,, 840
sp., Griff. v. 837, 838, 841
Cœlorachis hirsuta, Brongn. vii. 162
muricata, Brongn. ,, 157
Cœlospermum, *Bl.* iii. 159
paniculatum, F. Muell. ,, 160
reticulatum, Benth. ,, 160
scandens, *Bl.* ,, 159
Cœlostegia, *Benth.* i. 352
Griffithii, *Benth.* ,, 353
Coffea, *Linn.* iii. 153
alpestris, Wight ,, 106
bengalensis, *Roxb.* ,, 153
densiflora, Bl. ,, 155
? *elliptica*, Thw. ,, 107
fragrans, *Wall.* ,, 154
grumelioides, Wight ,, 106
Horsfieldiana, Miq. ,, 153
Jenkinsii, *Hk. f.* ,, 155
khasiana, *Hk. f.* ,, 154
salicifolia, Miq. ,, 155
tetrandra, Roxb. ,, 159
travancorensis, *W. & A.* ,, 154
triflora, Moon ,, 154
Wightiana, *W. & A.* ,, 154
sp., Hk. f. & T. ,, 154
sp., Wall. iii. 154, 192
Coix, *Linn.* vii. 99
agrestis, Lour. ,, 100
aquatica, *Roxb.* ,, 100
arundinacea, Koen. ,, 102
arundinacea, Lamk. ,, 100
barbata, Roxb. ,, 102
crypsoides, C. Muell. ,, 102
exaltata, Jacq. ,, 100
gigantea, Roxb. vii. 100, 421
gigantea, Hb. Russ. vii. 102
heteroclita, Roxb. ,, 101
Koenigii, Spreng. ,, 102
Lachryma, Linn. ,, 100
Lachryma-Jobi, *Linn.* vii. 100, 421
lingulata, Hack. vii. 100
Mayuen, Roman. ,, 100
Coix Vol. Page
ovata, Stokes vii. 100
pendula, Salisb. ,, 100
puellarum, Balans. ,, 100
stenocarpa, Balans. ,, 100
stigmatosa, Koch & Bouché ,, 100
sulcata, Rottl. ,, 102
tubulosa, Hack. ,, 100
Colbertia, Salisb. i. 37
augusta, Wall. ,, 38
coromandeliana, DC. ,, 38
floribunda, Wall. ,, 38
obovata, Bl. ,, 37
COLCHICEÆ vi. 301
Colchicum, *Linn.* vi. 356
luteum, *Baker* ,, 356
Coldenia, *Linn.* iv. 144
procumbens, *Linn.* ,, 144
Colebrookea, *Sm.* iv. 642
oppositifolia, *Sm.* ,, 642
oppositifolia, Lodd. ,, 643
ternifolia, Roxb. ,, 642
Colebrookia, Donn. vi.
bulbifera, Roxb. ,, 206
Coleus, *Lour.* iv. 624
amboinicus, Lour. ,, 625
aromaticus, *Benth.* ,, 625
atropurpureus, *Benth.* ,, 626
barbatus, *Benth.* ,, 625
Benthamianus, Arn. ,, 626
crassifolius, Benth. ,, 625
fruticosus, Benth. , 623
glabratus, Benth. ,, 622
Heyneii, Benth. ,, 624
inflatus, *Benth.* ,, 626
Macraei, Benth. ,, 626
malabaricus, *Benth.* ,, 626
mollis, Benth. ,, 626
ovatus, Benth. ,, 626
paniculatus, Benth. ,, 622
parviflorus, *Benth.* ,, 625
? *rugosus*, Benth. ,, 624
Schimperi, Vatke ,, 625
scutellarioides, *Benth.* ,, 626
spicatus, *Benth.* ,, 624
? *tuberosus*, Benth. ,, 625
urticifolius, Benth. ,, 623
Walkeri, Benth. ,, 626
Wightii, Benth. ,, 622
Zatarhendi, Dalz. & Gibs. ,, 624
Collabium, *Bl.* v. 784, vi. 178
nebulosum, Bl. v. 785
simplex, Rchb. f. ,, 785
Wrayi, *Hk. f.* v. 784, vi. 190
Colladoa distachya, Cav. vii. 128
Collæa cinerascens, Grah. ii. 213
gibba, Grah. ii. 217, 218
mollis, Grah. ii. 213

Collæa Vol. Page
trinervia, DC. ... ... ii. 212
venosa, Grah. ... ... „ 217
Collyris major, Vahl ... ...iv. 50, 51
minor, Vahl ... ... iv. 49
Colocasia, *Linn.* ... ... vi. 523
acris, Schott ... ... „ 523
affinis, *Schott* ... ... „ 523
Antiquorum, *Schott* ... ... „ 523
cochleata, Miq. ... ... „ 525
cucullata, Schott ... ... „ 525
esculenta, Schott ... ... „ 523
euchlora, C. Koch & Lind. „ 523
fallax, *Schott* ... ... „ 524
Fontanesii, Schott ... ... „ 523
? *fornicata*, Kunth ... ... „ 526
gigantea, *Hk. f.* ... ... „ 524
indica, Engl. ... ... „ 524
indica, Kunth ... ... „ 525
macrorrhiza, Schott... ... „ 526
Mannii, *Hk. f.* ... ... „ 524
? *montana*, Kunth ... ... „ 525
mucronata, Kunth ... ... „ 526
navicularis, Koch & Bouché „ 527
nymphæifolia, Kunth ... „ 523
odora, Brongn. ... ... „ 526
odorata, Hook. ... ... „ 526
pruinipes, Koch ... ... „ 523
? *pumila*, Kunth ... ... „ 522
rapiformis, Kunth ... ... „ 525
rugosa, Kunth ... ... „ 525
virosa, *Kunth* ... ... „ 524
vivipara, Thw. ... ... „ 522
Wendlandii, Engl. ... ... „ 524
sp., Hk. f. & T. ... ... „ 523
sp., Wall. ... ... vi. 523, 526, 527
COLOCASIEÆ ... ... vi. 491
Colpodium, Trin. ... vii. 311, 346, 421
aquaticum, Trin. ... ... vii. 310
nutans, Griseb. ... ... „ 312
subspicatum, Hack. ... ... „ 311
Colpopodeum, *sp.* Wall. ... vi. 299
Colquhounia, *Wall.* ... ... iv. 674
coccinea, *Wall.* ... ... „ 674
elegans, *Wall.* ... ... „ 674
tenuiflora, *Hk. f.* ... ... „ 674
tomentosa, Houllet ... ... „ 674
vestita, *Wall.* ... ... „ 674
sp., Clarke... ... ... „ 700
Colubrina, *Rich.* ... ... i. 642
asiatica, *Brongn.* ... ... „ 642
javanica, Miq. ... ... „ 642
pubescens, *Kurz* ... ... „ 642
travancorica, *Bedd.* ... „ 643
Columbia, *Pers.* ... ... i. 393
floribunda, *Wall.* ... ... „ 393
merguensis, *Planch.* ... „ 394
Columnea balsamea, Roxb. ... iv. 271
Columnea Vol. Page
diffusa, Roxb. ... ... iv. 277
heterophylla, Roxb. ... ... „ 270
longifolia, Linn. ... ... „ 274
minuta, Roxb. ... ... „ 281
tomentosa, Roxb. ... ... „ 259
Colutea, *Linn.* ... ... ii. 103
arborescens, *Linn.* ... ... „ 103
nepalensis, Sims ... ... „ 103
Comarum flavum, Roxb. ... ii. 359
Salessovii, Bunge ... ... „ 348
Combesia abyssinica, A. Rich. ii. 412
COMBRETACEÆ ... ... ii. 443
COMBRETEÆ ... ... ii. 443
Combretum, *Linn.* ... ... ii. 452
aculeatum, Vent. ... ... „ 453
acuminatum, *Roxb.* ... ... „ 455
albidum, G. Don ... ... „ 458
apetalum, *Wall.* ... ... „ 453
attenuatum, Wall. ... ... „ 456
chinense, *Roxb.* ... ... „ 457
costatum, Roxb. ... ... „ 455
dasystachyum, *Kurz* ... „ 457
decandrum, *Roxb.* ... ... „ 452
elegans, Wall. ... ... „ 454
extensum, *Roxb.* ... ... „ 458
flagrocarpum, *Herb. Calc.* „ 455
formosum, Griff. ... ... „ 458
Griffithii, Heurck & Muell. „ 457
Heyneanum, Wall. ... ... „ 458
Horsfieldii, Miq. ... ... „ 458
insigne, Heurck & Muell. „ 453
lætum, Wall. ... ... „ 453
latifolium, Bl. ... ... „ 458
laxum, Roxb. ... ... „ 458
lepidotum, Presl ... ... „ 456
leucanthum, Heurck & Muell. ... ... „ 458
lucidum, Bl. ... ... „ 454
macrostachyum, Wall. ... „ 458
malulæa, Wall. ... ... „ 456
nanum, *Ham.* ... ... „ 457
neurophyllum, ? Miq. ... „ 455
ovale, Br. ... ... ii. 453, 459
ovalifolium, *Roxb.* ... ... ii. 458
pilosum, *Roxb.* ... ... „ 453
platyphyllum, Heurck & Muell. ... ... „ 458
Porterianum, Wall. ... ... „ 457
pyrifolium, *Kurz* ... ... „ 453
quadrangulare, *Kurz* ... „ 456
rotundifolium, Roxb. ... „ 458
Roxburghii, G. Don ... ... „ 458
Roxburghii, Spreng. ... „ 452
sarcopterum, Thw. ... ... „ 455
semi-adnatum, *Heurck & Muell.* ... ... „ 459
sericeum, Wall. ... ... „ 450

Combretum Vol. Page
spinescens, Wall. ... ... ii. 453
squamosum, *Roxb.* ... ... „ 456
stenopetalum, Heurck & Muell. ... ... „ 455
subalternans, Wall. ... ... „ 454
sundaicum, *Miq.* ... ... „ 458
ternatum, Wall. ... ... „ 457
tetragonocarpum, *Kurz* ... „ 454
tetralophum, *Clarke* ... „ 454
Thwaitesianum, Heurck & Muell. ... ... „ 458
trifoliatum, *Vent.* ... ... „ 454
undulatum, Wall. ... ... „ 454
Van Heurckii, Muell. ... „ 457
virgatum, Wall. ... ... „ 453
Wallichii, *DC.* ... ... „ 456
Wallichii, Hassk. ... ... „ 456
Wallichii, Kurz ... ... „ 455
Wightianum, Thw. ... ... „ 458
Wightianum, Wall. ... ... „ 458
sp., Griff. ... ... „ 459
sp., Hk. f. & T. ... ... „ 455
Cometes, *Linn.* ... ... iv. 712
apiculata, Dcne. ... ... „ 712
surattensis, *Burm.* ... ... „ 712
Commelina, *Linn.* ... ... vi. 368
agraria, Kunth ... ... „ 369
alba, Ham. ... ... „ 374
albescens, *Hassk.* ... ... „ 373
angustifolia, Hassk. ... „ 373
appendiculata, *Clarke* ... „ 374
attenuata, *Kœn.* ... ... „ 372
avenæfolia, Grah. ... ... „ 374
axillaris, Linn. ... ... „ 389
benghalensis, *Linn.* vi: 370, 374
benghalensis, Wall. ... ... vi. 372
bracteolata, Lamk. ... ... „ 378
cæspitosa, Roxb. ... ... „ 369
canescens, Vahl ... ... „ 370
clavata, *Clarke* ... ... „ 371
coelestis, Willd. ... ... „ 369
communis, Linn. ... ... „ 374
communis, Roxb. ... ... „ 372
communis, Wall. ... ... vi. 370, 371, 372, 373
communis, Walt. ... ... vi. 369
conspicua, Bl. ... ... „ 382
? *cristata*, Bl. ... ... „ 385
cucullata, Linn. ... ... „ 370
cymosa, Bl. ... ... „ 390
deficiens, Van Houtte ... „ 369
delicatula, Schlecht. ... „ 370
densiflora, Bl. ... ... „ 390
diandra, Kœn. ... ... „ 379
diffusa, Burm. ... ... „ 369
Donii, Dietr. ... ... „ 372
elata, Vahl... ... ... „ 377
Commelina Vol. Page
ensifolia, *Br.* ... ... vi. 374
ensifolia, F. Muell. ... ... „ 373
esculenta, Heyne ... ... „ 377
falcata, Hassk. ... ... „ 371
Forskalii, *Vahl* ... ... „ 371
gigantea, Vahl ... ... „ 379
glabra, *Clarke* ... ... „ 371
Hamiltonii, Spreng. ... „ 390
Hasskarlii, *Clarke* ... ... „ 370
herbacea, Roxb. ... ... „ 377
hirsuta, *Clarke* ... ... „ 371
hispida, Ham. ... ... „ 390
Hookerii, Dietr. ... ... „ 379
Kurzii, *Clarke* ... ... „ 373
lanuginosa, Heyne ... ... „ 380
linearifolia, Kunth ... ... „ 369
lineolata, Bl. ... ... „ 377
longicaulis, Jacq. ... ... „ 369
longifolia, Spreng. ... ... „ 379
longifolia, Thw. ... ... „ 373
lunata, Heyne ... ... „ 374
maculata, Edgew. ... ... „ 372
? *minuta*, Bl. ... ... „ 379
mollis, Jacq. ... ... „ 370
multicaulis, Hochst. ... „ 373
nana, Roxb. ... ... „ 378
nervosa, Burm. ... ... „ 370
nilagirica, Steud. ... ... „ 371
Nimmoniana, Grah. ... „ 374
nudicaulis, Burm. ... ... „ 379
nudiflora, *Linn.* ... ... „ 369
nudiflora, Linn. ... ... „ 379
obliqua, *Ham.* ... ... „ 372
paleata, *Hassk.* ... ... „ 372
paludosa, Bl. ... ... „ 372
paludosa, Burm. ... ... „ 372
pedunculosa, Link ... ... „ 370
persicariæfolia, *Wight* ... „ 372
polyspatha, Wight ... ... „ 372
procurrens, Schlecht. ... „ 370
prostrata, Regel ... ... „ 370
pumila, Royle ... ... „ 378
radicans, Spreng. ... ... „ 379
rajmahalensis, Clarke ... „ 372
repens, Roxb. ... ... „ 372
rugulosa, Clarke ... ... „ 374
salicifolia, *Roxb.* ... ... „ 370
salicifolia, Bojer ... ... „ 369
salicifolia, Thw. ... ... „ 371
scaberrima, Bl. ... ... „ 382
scapiflora, Roxb. ... ... „ 375
Schimperiana, Hochst. ... „ 373
secundiflora, Bl. ... ... „ 368
semiovata, Ham. ... ... „ 372
semiovata, Wall. ... ... „ 374
setosa, Wight ... ... „ 373
sikkimensis, *Clarke* ... ... „ 369

Commelina Vol. Page
Simsoni, Clarke ... ... vi. 374
sinica, R. & S. ... ... „ 379
spirata, Linn. ... ... „ 378
striata, Edgew. ... ... „ 372
striata, Hochst. ... ... „ 369
striata, Wall. ... ... vi. 373, 374
subaurantiaca, Hochst. ... vi. 369
subulata, *Roth* ... . „ 369
suffruticosa, *Bl.* ... ... „ 374
tuberosa, Lour. ... ... „ 375
turbinata, Vahl ... ... „ 370
undulata, *Br.* ... ... „ 373
vaginata, Linn. ... ... „ 381
zeylanica, Falkenb. ... ... „ 374
sp., Edgew. ... ... „ 374
sp., Hk. f. & T. ... vi. 373, 374, 387
sp., Miq. ... ... vi. 371
sp., Wall. ... ... „ 373
COMMELINACEÆ ... ... vi. 366
COMMELINEÆ... ... ... vi. 366
Commersonia, *Forsk.* ... ... i. 378
echinata, Bl. ... ... „ 378
herbacea, G. Don ... ... „ 376
javensis, G. Don ... ... „ 378
platyphylla, *Andrews* ... „ 378
COMPOSITÆ ... ... iii. 219, 301
Compsanthus maculatus, Spreng. vi. 359
Compsoa maculata, D. Don vi. 359
Conceveibum javanense, Bl. v. 422
latifolium, Zipp. ... ... „ 422
Conchidium, Griff. ... ... v. 785
pusillum, Griff. ... ... „ 788
Conchophyllum imbricatum, Bl. iv. 51
Congea, *Roxb.* ... ... iv. 602
azurea, Wall. ... ... iv. 602, 604
barbata, Wall. ... ... iv. 601
ferruginea, Wall. ... ... „ 601
Jackiana, Wall. ... iv. 601, 602
paniculata, Wall. ... iv. 599, 600
pentandra, Roxb. ... ... iv. 602
pentandra, Wall. ... ... „ 602
tomentosa, *Roxb.* ... ... „ 603
unguiculata, Wall. ... ... „ 601
velutina, *Wight* ... ... „ 603
vestita, *Griff.* ... ... „ 603
villosa, *Wight* ... ... „ 603
sp., Griff. ... ... „ 601
Conghas zeylonensis, Hb. Madr. i. 681
CONIFERÆ ... ... v. 643
CONNARACEÆ... ... ... ii. 46
Connaracea, Wall.... i. 676, ii. 47, 49, 51, 52, 53, iv. 13
CONNAREÆ ... ... ii. 46
Connaropsis, *Planch.* ... ... i. 439
diversifolia, Kurz ... ... „ 440
Griffithii, *Planch.* ... ... „ 440
monophylla, *Planch.* ... „ 440
Connarus, *Linn.* ... ... ii. 50
asiaticus, Willd. ... ... „ 50
Championii, *Thw.* ... ... „ 52
falcatus, Bl. ... ... „ 53
ferrugineus, *Jack* ... ... „ 51
floribundus, Wall. ... ... „ 52
foliolosus, Jack ... ... „ 54
fulgens, Wall. ... ... „ 49
gibbosus, *Wall.* ... ... „ 52
grandis, *Jack* ... ... „ 53
Griffithii, *Hk. f.* ... ... „ 52
igneus, Wall. ... ... „ 54
? *Jackianus*, Wall. ... i. 678, ii. 54
latifolius, *Wall.* ... ... ii. 53
Maingayi, *Hk. f.* ... ... „ 53
? *mimosoides*, Jack ... ... „ 49
mimosoides, Vahl ... ii. 49, 50, 54
monocarpus, *Linn.* ... ... ii. 50
monocarpus, W. & A. ... „ 47
monophyllus, Wall. ... ... „ 56
oliogophyllus, *Planch.* ... „ 53
paniculatus, *Roxb.* ... ... „ 52
? *pentandrus*, Roxb. ... ... „ 52
pinnatus, Lamk. ... ... „ 50
Ritchiei, *Hk. f.* ... ... „ 51
? *rugosus*, Wall. ... ... „ 48
santaloides, Vahl ... ... „ 47
semidecandrus, *Jack* ... „ 52
unifoliatus, Thw. ... ... „ 55
? *velutinus*, Wall. ... ... „ 54
Wallichii, Planch. ... ... „ 53
Wightii, *Hk. f.* ... ... „ 51
Conobea indica, Spreng. ... iv. 269
Conocarpus acuminata, Roxb. ii. 450
latifolia, DC. ... ... „ 450
CONOCEPHALEÆ ... ... v. 478
Conocephalus, *Bl.* ... ... v. 545
amœnus, *King* ... ... „ 545
? *azureus*, Teysm. & Binn. „ 546
concolor, Dalz. ... ... „ 546
gratus, Miq. ... ... „ 545
naucleiformis, Lindl. ... „ 545
niveus, Wight ... ... „ 590
ovatus, Trecul .. .. „ 545
pubescens, Trecul ... ... „ 545
Roxburghii, Trecul ... ... „ 545
Scortechinii, *King* ... ... „ 545
suaveolens, *Bl.* ... ... „ 545
suaveolens, Trecul ... ... „ 545
subtrinervius, *Miq.* ... .. „ 546
Conophallus bulbifer, Schott vi. 515
commutatus, Schott ... ... „ 515
lyratus, Schott ... ... „ 517
tuberculiger, Schott ... ... „ 517
CONOSTYLEÆ ... ... vi. 264
Conringia, *Rchb.* ... ... i. 152
planisiliqua, *Fisch. & Mey.* „ 152

Conringia Vol. Page
Thaliana, Rchb. ... ... i. 148
Convallaria cirrifolia, Wall.... vi. 322
Govaniana, Wall. ... ... „ 319
leptophylla, D. Don ... ... „ 321
multiflora, Linn. ... ... „ 319
oppositifolia, Wall. ... ... „ 321
punctata, Wall. ... ... „ 321
verticillata, Linn. ... ... „ 321
sp., Griff. ... ... „ 321
CONVALLARIEÆ ... ... vi. 300
CONVOLVULACEÆ ... ... iv. 179
CONVOLVULEÆ ... ... iv. 180
Convolvuloides palmata,
Moench ... ... iv. 204
triloba, Moench ... ... „ 199
Convolvulus, *Linn.* ... ... iv. 217
acetosæfolius, Turcz ... ... „ 217
acetosæfolius, Vahl ... ... „ 213
Adansonii, Lamk. ... ... „ 210
adpressus, Wall. ... ... „ 196
affinis, Wall. ... ... iv. 206, 207
Aitchisoni, *Clarke* ... ... iv. 218
albicans, Wall. ... ... „ 213
amplus, Wall. ... ... „ 185
anceps, Linn. ... ... „ 212
angularis, Linn. ... ... „ 213
angustifolius, Lamk. ... „ 205
arenarius, Vahl... ... ... „ 213
argenteus, Wall. ... ... „ 185
argyrophyllus, Wall. ... „ 186
arvensis, *Linn.* ... ... „ 219
asclepiadeus, Wall. ... ... „ 220
asper, Wall. ... ... „ 198
atropurpureus, Wall. ... „ 194
barbatus, Wall. ... ... „ 195
barbiger, Wall. ... ... „ 193
barlerioides, Wall. ... ... „ 201
Batatas, Linn. ... ... „ 202
Beladambu, Spreng. ... „ 210
bellus, Spreng. ... ... „ 215
Benthami, Wall. ... ... „ 205
bicolor, Vahl ... ... „ 216
bilobatus, Roxb. ... ... „ 212
binectariferus, Wall. ... „ 216
blandus, Roxb. ... ... „ 211
Blumii, Dietr. ... ... „ 205
brachyphyllus, Boiss. ... „ 217
bracteatus, Vahl ... ... „ 216
Brownii, Spreng. ... ... „ 214
bryoniæfolius, Salisb. ... „ 204
cæspitosus, Roxb. ... ... „ 205
cairicus, Linn. ... ... „ 215
Calverti, Boiss. ... ... „ 218
calycinus, Roxb. ... ... „ 201
campanulatus, Spreng. ... „ 211
candicans, Roth ... ... „ 183
candicans, Wall. ... ... „ 184

Convolvulus Vol. Page
capitatus, Vahl ... ... iv. 193
capitellatus, Wall. ... ... „ 204
capitiformis, Poir. ... ... „ 193
carnosus, Spreng. ... ... „ 213
cephalanthus, Wall. ... ... „ 216
chinensis, Ker ... ... „ 219
Choisyanus, Wall. ... ... „ 188
chryseides, Spreng. ... ... „ 206
coccineus, Spreng. ... ... „ 199
cœruleus, Spreng. ... ... „ 199
copticus, Linn. ... ... „ 200
crispatulus, Wall. ... ... „ 212
cuneatus, Willd. ... ... „ 191
cymosus, Lamk. ... ... „ 211
cynanchifolius, Wall. ... „ 208
dasyspermus, Spreng. ... „ 215
dentatus, Vahl ... ... „ 206
denticulatus, Lamk. ... „ 208
denticulatus, Spreng. ... „ 205
deserti, Hochst. & Steud. „ 218
dichrous, R. & S. ... ... „ 213
digitatus, Roxb. ... ... „ 215
digitatus, Spreng. ... ... „ 202
Dillenii, Lamk. ... ... „ 199
dissectus, Linn. ... ... „ 214
divaricatus, Wall. ... ... „ 219
edulis, Thunb. ... ... „ 202
elegans, Wall. ... ... „ 224
ellipticus, Spreng. ... ... „ 192
emarginatus, Vahl ... ... „ 201
eriocarpus, Spreng. ... ... „ 204
erythrocarpus, Wall. ... „ 187
esculentus, Salisb. ... ... „ 202
fastigiatus, Roxb. ... ... „ 209
fastigiatus, Wall. ... ... „ 187
festivus, Wall. ... ... iv. 185, 187
filicaulis, Vahl ... ... iv. 205
Finlaysonianus, Wall. ... „ 186
flagelliformis, Roxb. ... „ 209
flavus, *Willd.* ... ... „ 219
formosus, Roxb. ... ... „ 214
fulgens, Wall. ... ... „ 191
gangeticus, Linn. ... ... „ 206
gangeticus, Roxb. ... ... „ 184
gangeticus, Wall. ... ... „ 210
gemellus, Burm. ... ... „ 207
gemellus, Wall. ... ... „ 207
glandulosus, Ham. ... ... „ 195
glandulosus, Wall. ... ... „ 220
glomeratus, *Chois.* ... ... „ 219
glomeratus, Wall. ... ... „ 190
gossypinus, Wall. ... ... „ 203
grandiflorus, Linn. f. ... „ 198
grandiflorus, Wall. ... ... „ 197
Hardwickii, Spreng. ... „ 201
hastatus, Lamk. ... ... „ 205
hederaceus, Linn. ... ... „ 199

Convolvulus Vol. Page
hepaticifolius, Spreng. ... iv. 204
heptaphyllus, Rottl. ... „ 215
hirsutissimus, Wall. ... ... „ 193
hirsutus, Roxb. ... ... „ 202
hirtus, Wall. ... ... „ 207
hispidus, Vahl ... ... „ 204
hypocrateriformis, Lamk.... „ 184
imbricatus, Spreng. ... ... „ 191
incrassatus, Wall. ... ... „ 209
indicus, Moris ... ... „ 202
insignis, Spreng. ... ... „ 202
involucratus, Ker ... ... „ 216
kentrocaulos, Steud. ... „ 214
Kleinii, Spreng. ... ... „ 210
Kleinii, Wall. ... ... „ 214
lanuginosus, Aitch. ... „ 218
lanuginosus, Lamk. ... ... „ 218
lasiospermus, Vis. ... ... „ 207
laurifolius, Roxb. ... ... „ 192
laurifolius, Wight ... ... „ 186
linifolius, Wall. .. ... „ 205
littoralis, Linn. ... ... „ 213
lupulifolius, Griff. ... ... „ 215
luteolus, Spreng. ... ... „ 199
malabaricus, Heyne ... „ 190
malabaricus, Linn. ... iv. 189, 190
malabaricus, Roxb. ... ... iv. 210
malabaricus, Wall. ... ... „ 186
Malcolmii, Roxb. ... ... „ 219
marginatus, Lamk. ... ... „ 209
maritimus, Lamk. ... ... „ 212
maximus, Vahl ... ... „ 209
medium, Roxb. ... ... „ 205
melanostictus, Schldl. ... „ 184
microcalyx, *Clarke* ... ... „ 220
microphyllus, *Sieb.* ... ... „ 218
multibracteatus, Wall. ... „ 192
munitus, Wall. ... ... iv. 202, 214
muricatus, Linn. ... ... iv. 197
nemorosus, R. & S. ... ... „ 202
nervosus, Burm. .. ... „ 185
Nil, Linn. ... ... „ 199
oblongus, Wall. ... ... „ 201
obovatus, Wall. ... ... „ 194
obscurus, Linn. ... ... „ 207
obtectus, Wall. ... ... „ 186
orixensis, Rottl. ... ... „ 191
ornatus, Wall. ... ... „ 183
paniculatus, Linn. ... ... „ 202
paniculatus, Wall. ... ... „ 213
parviflorus, *Vahl* ... ... „ 220
pedatus, Roxb. ... ... „ 215
peduncularis, Wall. ... „ 186
penangianus, Wall. .. ... „ 196
pennatus, Lamk. ... ... „ 199
pentadactylis, Wall. ... „ 214
pentagonus, Roxb. ... ... „ 211

Convolvulus Vol. Page
pentaphyllus, Linn. ... iv. 202
Pes-Capræ, Linn. ... ... „ 212
Pes-tigridis, Spreng. ... „ 204
phœniceus, Spreng. ... ... „ 199
pileatus, Spreng. ... ... „ 203
pilosus, Roxb. ... ... „ 213
platensis, Spreng. ... ... „ 202
platypeltis, Spanog. ... „ 211
pluricaulis, *Chois.* ... ... „ 218
polyanthus, Wall. ... iv. 209, 210
pomaceus, Wall. ... iv. 188, 189
purpureus, Linn. ... ... iv. 200
Quamoclit, Spreng. ... ... „ 199
quinatus, Spreng. ... ... „ 214
racemosus, R. & S. ... ... „ 210
Rampania, Wall. ... ... „ 204
reniformis, Roxb. ... ... „ 206
repens, Vahl ... ... „ 210
reptans, Linn. ... ... „ 210
Rheedii, Wall. ... ... „ 201
rhyniospermus, *Hochst.* ... „ 218
roseus, Kunth ... ... „ 202
Rothii, Spreng. ... ... „ 211
Rottleri, Spreng. ... ... „ 189
Rottlerianus, *Chois.* ... „ 219
Roxburghii, Wall. ... ... „ 185
rubens, Wall. ... ... „ 195
rubicundus, Wall. ... ... „ 195
rufescens, Chois. ... ... „ 219
rugosus, Rottl. ... ... „ 209
rupestris, Pallas ... ... „ 207
scindicus, *Stocks* ... ... „ 217
scindicus, Boiss. ... ... „ 218
semidigynus, Roxb. ... ... „ 223
sepiarius, Wall. ... ... „ 209
sessiliflorus, Spreng. ... „ 204
setosus, Wall. ... ... „ 194
sibiricus, Linn. ... ... „ 207
simplex, Pers. ... ... „ 205
speciosus, Linn. f. ... ... „ 185
sphærocephalus, Roxb. ... „ 204
stipulaceus, Roxb. ... ... „ 209
stipulatus, Lamk. ... ... „ 200
stoloniferus, Cyr. ... ... „ 213
striatus, Vahl ... ... „ 209
strigosus, Spreng. ... ... „ 194
strigosus, Wall. ... ... „ 193
Tarita, Ham. ... ... iv. 183, 220
tenuifolius, Ham. ... ... iv. 214
tenuifolius, Vahl ... ... „ 214
Thonningii, Schum. ... ... „ 200
tiliæfolius, Lamk. ... ... „ 184
tridentatus, Linn. ... ... „ 205
triflorus, Vahl ... ... „ 209
triqueter, Vahl ... ... „ 212
Tuba, Schlecht. ... ... „ 198
tuberculatus, Lamk. ... ... „ 215

Convolvulus Vol. Page
Turpethum, Linn. ... ... iv. 212
umbellatus, Wall. ... ... „ 211
uniflorus, Lamk. ... ... „ 201
valerianoides, Blanco ... „ 220
vestitus, Wall. ... ... „ 192
vitifolius, Linn. ... ... „ 213
Wallichianus, Spreng. ... „ 217
Wightii, Wall. ... ... „ 203
zeylanicus, Moon ... ... „ 216
Conyza, *Less.* ... ... iii. 257
abbreviata, Wall. ... ... „ 234
absinthifolia, DC. ... ... „ 259
acuminata, Wall. ... ... „ 239
adenocarpa, *Dalz. & Gibs.* „ 259
ægyptiaca, *Ait.* ... ... „ 258
ægyptiaca, Hk. f. & T. ... „ 254
alata, Roxb. ... ... „ 271
amplectens, Wall. ... ... „ 260
amplexicaulis, Lamk. ... „ 260
amplexicaulis, Wall. ... „ 261
anagallidifolia, Wall. ... „ 261
andryaloides, DC. ... ... „ 255
angustifolia, *Roxb.* ... ... „ 258
angustifolia, Thw. ... ... „ 254
anthelmintica, Linn. ... „ 236
appendiculata, Bl. ... ... „ 270
arborea, Wall. ... ... „ 239
argentea, Wall. ... ... „ 295
aromatica, Wall. ... ... „ 270
asteroides, Wall. ... ... „ 258
attenuata, Wall. ... ... „ 231
aurita, Linn. f. ... ... „ 271
balsamifera, Linn. ... ... „ 270
barbata, Wall. ... ... „ 262
bellidifolia, Wall. ... ... „ 234
bifoliata, Wall. ... ... „ 261
bifoliata, Willd. ... ... „ 261
blanda, Wall. ... ... „ 241
bracteolata, Wall. ... ... „ 230
candicans, Wall. ... ... „ 387
Candolleana, Boiss. ... ... „ 272
Cappa, Ham. ... ... „ 295
cernua, Wall. ... ... „ 271
chinensis, Lamk. ... ... „ 235
chinensis, Linn. ... ... „ 268
cinerascens, Wall. ... ... „ 234
cinerea, Linn. ... ... „ 234
conspicua, Wall. ... ... „ 257
corymbosa, Roxb. ... ... „ 272
cuneifolia, Wall. ... ... „ 672
dasycoma, Miq. ... ... „ 269
densiflora, Wall. ... ... „ 269
diffusa, Roxb. ... ... „ 265
disticha, Wall. ... ... „ 258
divergens, Wall. ... ... „ 234
elæagnifolia, Wall. ... ... „ 237
elegantula, Wall. ... ... „ 234

Conyza Vol. Page
elongata, Wall. ... ... iii. 270
eriophora, Wall. ... ... „ 295
eupatarioides, Wall. ... ... „ 295
excisa, Wall. .. .. „ 269
extensa, Wall. ... ... „ 239
falcigera, Wall. ... ... „ 269
fasciculata, Wall. ... ... „ 270
fistulosa, Roxb. ... ... „ 262
foliolosa, Ham. ... ... „ 298
foliolosa, Wall. ... ... iii. 261, 397
glomerata, Wall. ... ... iii. 262
gracilis, Heyne ... ... „ 265
gracilis, Wall. ... ... „ 262
grandis, Wall. ... ... „ 269
graveolens, Wall. ... ... „ 254
heterophylla, Lamk. ... ... „ 234
heterotricha, Wall. ... ... „ 295
Heyneana, Wall. ... ... „ 263
hieracifolia, Spreng. ... „ 263
hirsuta, Wall. ... ... iii. 258, 259
holosericea, Wall. ... ... iii. 262
hymenophylla, Wall. ... „ 265
incana, Wall. ... ... „ 234
indica, Miq. ... ... „ 272
indica, Wall. ... ... „ 238
japonica, *Less.* ... ... „ 258
Jerdoni, Clarke ... ... iii. 254, 258
lacera, Roxb. ... ... iii. 263
laciniata, Roxb. ... ... „ 264
lactucæfolia, DC. ... ... „ 263
lactucæfolia, Wall. ... ... „ 261
lanceolaria, Roxb. ... ... „ 269
lanceolata, Wall. ... iii. 234, 272
lanuginosa, Wall. ... ... iii. 295
linifolia, Wall. ... ... „ 234
longicaulis, Wall. ... iii. 243, 244
longifolia, Heyne ... ... iii. 269
longispina, Z. & M. ... ... „ 268
macrostachya, Wall. ... ... „ 263
marginata, Edgew. ... ... „ 259
membranacea, Wall. ... ... „ 265
mollis, Willd. ... ... „ 234
multicaulis, DC. ... ... „ 258
multiflora, Wall. ... ... „ 234
muralis, Ham. ... ... „ 265
Musra, Ham. ... ... „ 263
napifolia, Wall. ... ... „ 263
natans, Ham. ... ... „ 263
nutans, Bl. ... ... „ 271
nutans, Wall. ... ... „ 363
obliqua, Willd. ... ... „ 260
obovata, Wall. ... ... „ 268
odontophylla, Boiss. ... ... „ 273
ovata, Wall. ... ... „ 234
paniculata, Wall. ... ... „ 261
patula, Ait. ... ... iv. 235, 259
? petiolaris, DC. ... ... iv. 258

Conyza Vol. Page
pinnatifida, Roxb. ... iii. 259
polycephala, Edgew. ... „ 258
polygonata, Wall. ... „ 293
procera, Wall. ... „ 268
prolifera, Lamk. ... „ 234
pubescens, DC. ... „ 254
punctulata, Wall. ... „ 235
punduana, Wall. ... „ 240
purpurea, Wall. ... „ 262
racemosa, Wall. ... „ 262
repanda, Roxb. ... „ 268
riparia, Blume ... „ 268
Roylei, DC. ... „ 253
rufa, *Wall.* ... „ 259
runcinata, Wall. ... „ 264
saligna, Wall. ... „ 235
scandens, Wall. ... „ 241
semipinnatifida, Wall. ... „ 257
semivestita, Wall. ... „ 268
senecioides, Ham. ... „ 672
sericea, Wall. ... „ 262
serici-vestita, Wall. ... „ 268
serrulata, Clarke ... „ 259
serrulata, Wall. ... „ 258
sessilifolia, Wall. ... „ 272
sonchifolia, Wall. ... „ 264
spinidens (*spiridens*), Miq. „ 265
squarrosa, Wall. ... „ 269
striata, Wall. ... „ 258
stricta, *Willd.* ... „ 258
stricta, Wall. ... „ 258
subcapitata, Wall. ... „ 262
subsessilis, Wall. ... „ 230
subsimplex, Wall. ... iii. 234, 265
tenera, Wall. ... iii. 266
thyrsiflora, Ham. ... „ 263
tomentosa, Wall. ... „ 272
travancorensis, Wall. ... „ 258
umbrosa, Kar. & Kir. ... „ 253
veronicæfolia, Wall. ... „ 258
vestita, Wall. ... „ 270
villosa, Ham. ... „ 263
villosa, Wall. ... „ 260
virens, Wall. ... iii. 264, 265
viscidula, *Wall.* ... iii. 258
volkameriæfolia, Wall. ... „ 240
volubilis, Wall. ... „ 257
Wallichii, DC. ... „ 258
wangtuensis, Clarke, lapsu Brachyactis ... „ 253
Wightiana, Wall. ... iii. 239, 261
Cookia dulcis, Bedd. ... i. 506
graveolens, W. & A. ... „ 505
? *macrophylla*, Lindl. ... „ 504
punctata, Hassk. ... „ 502
punctata, Retz. ... „ 559
punctata, Sonn. ... „ 505

Vol. Page
Copisma, E. Mey. ... ii. 223
Coptis, *Salisb.* ... i. 22
Teeta, *Wall.* ... „ 23
Coptosapelta, *Korth.* ... iii. 34
flavescens, *Korth.* ... „ 35
Griffithii, *Hk. f.* ... „ 35
Corallobotrys, *Hk. f.* ... iii. 455
acuminata, *Hk. f.* ... „ 455
Corallocarpus, *Welw.* ... ii. 627
conocarpa, *Hk. f.* ... „ 628
epigæa, *Hk. f.* ... „ 628
? *etbaica*, Hk. f. ... „ 628
Fenzlii, Hk. f. ... „ 628
velutina, *Hk. f.* ... „ 628
Corallorhiza, *Br.* ... v. 709
indica, Lindl. ... „ 709
innata, *Br.* ... „ 710
Jacquemonti, Dcne. ... „ 710
sp., Lindl. ... „ 709
Corchorus, *Linn.* ... i. 396
acutangulus, *Lamk.* ... „ 398
æstuans ? Ham. ... „ 398
æstuans, Hb. Madr. ... „ 398
Antichorus, *Ræusch.* ... „ 398
Burmanni, DC. ... „ 398
capsularis, *Linn.* ... „ 397
decemangularis, Roxb. ... „ 397
fascicularis, *Lamk.* ... „ 398
fuscus, Roxb. ... „ 398
humilis, Munro ... „ 398
linearis, Wall. ... „ 398
Marua, Ham. ... „ 397
olitorius, *Linn.* ... „ 397
olitorius, Wall. ... „ 397
pumilus, Ham. ... „ 399
subscandens, Wall. ... „ 398
tridens, *Linn.* ... „ 398
trilocularis, *Linn.* ... „ 397
trilocularis, Burm. ... „ 398
urticæfolius, *W. & A.* ... „ 397
Cordia, *Linn.* ... iv. 136
acuminata, Wall. ... „ 143
africana, Lamk. ... „ 136
angustifolia, Roxb. ... „ 138
campanulata, Roxb. ... „ 140
cordifolia, Wall. ... „ 137
coromandeliana, Koen. & Retz. ... „ 144
diversa, Thw. ... „ 137
domestica, Roth ... „ 137
Finlaysoniana, Wall. ... „ 140
fragrantissima, *Kurz* ... „ 139
fulvosa, *Wight* ... iv. 137, 140
grandis, *Roxb.* ... iv. 137
grandis, Wall. ... „ 137
Griffithii, *Clarke* ... „ 139
hexandra, R. & S. ... „ 140

Cordia Vol. Page
incana, Royle ... ... iv. 139
indica, Lamk. ... ... „ 136
latifolia, Roxb. ... ... „ 137
latifolia, Wall. ... ... „ 136
? Leschenaultii, DC. ... „ 138
Macleodii, *Hk. f. & T.* ... „ 139
monoica, *Roxb.* ... ... „ 137
Myxa, *Linn.* ... ... „ 136
Myxa, Thw. ... ... „ 137
obliqua, *Willd.* ... ... „ 137
obliqua, Wight ... ... „ 137
oblongifolia, *Thw.* ... ... „ 138
octandra, *A. DC.* ... ... „ 140
officinalis, Lamk. ... ... „ 136
orientalis, Br. ... ... „ 140
paniculata, Roth ... ... „ 136
Perrottetii, *Wight* ... ... „ 138
Perrottetii, A. DC. ... ... „ 138
polygama, Roxb. ... ... „ 137
polygama, Wall. ... ... „ 140
reticulata, Roth ... ... „ 138
retusa, Vahl ... ... „ 144
Rothii, *R. & S.* ... ... „ 138
rotundifolia, Heyne ... „ 139
Roxburghii, *Clarke* ... ... „ 139
Rumphii, Bl. ... ... „ 140
Sebestena, Forsk. ... ... „ 136
serrata, Roxb. ... ... „ 140
subcordata, *Lamk.* ... ... „ 140
subopposita, DC. ... ... „ 138
thyrsiflora, Sieb. & Zucc. „ 141
tomentosa, Wall. ... ... „ 137
vestita, *Hk. f. & T.* ... ... „ 139
Wallichii, G. Don ... ... „ 137
sp., Hk. f. & T. ... ... iv. 137, 140
sp., Wall. ... ... iv. 140
CORDIEÆ ... ... iv. 134
Cordylestylis foliosa, Falc. ... vi. 111
Cordyline, *Commers* ... ... vi. 331
Jacquininii, Kunth ... ... „ 331
Sieberi, Kunth ... ... „ 331
terminalis, *Kunth* ... ... „ 331
terniflora, Planch ... ... „ 330
Cordyloblaste Henscheli, Mor. iii. 588
Coriandrum, *Linn.* ... ... ii. 717
sativum, *Linn.* ... ... „ 717
Coriaria, *Linn.* ... ... ii. 44
nepalensis, *Wall.* ... ... „ 44
CORIARIEÆ ... ... ii. 44
Coridochloa cimicina, Nees... vii. 64
fimbriata, Nees ... ... „ 64
semi-alata, Nees ... ... „ 64
sp., Wall. ... ... „ 64
Corisanthera vestita, Griff. ... iv. 373
CORISPERMEÆ ... ... v. 2
Corispermum, *Linn.* ... ... v. 9
hyssopifolium, *Linn.* ... „ 9

Vol. Page
CORNACEÆ ... ... ii. 740
Cornus, *Linn.* ... ... ii. 744
alternifolia, Linn. f. ... „ 744
australis, C. A. Mey. ... „ 744
brachypoda, C. A. Mey. ... „ 744
capitata, *Wall.* ... ... „ 745
japonica, Thunb. ... ... „ 745
macrophylla, *Wall.* ... „ 744
oblonga, *Wall.* ... ... „ 744
sanguinea, *Linn.* ... ... „ 744
Cornutia corymbosa, Burm. iv. 573, 576
corymbosa, Lamk. ... iv. 567, 576
Coronilla aculeata, Willd. ... ii. 115
cannabina, Willd. ... ... „ 115
grandiflora, Willd. ... ... „ 115
Sesban, Willd. ... ... „ 114
Cortia, *DC.* ... ... ii. 701
elata, Edgew. ... ... „ 698
Hookeri, *Clarke* ... ... „ 702
Lindleyii, *DC.* ... ... „ 701
vaginata, Edgew. ... ... „ 700
sp., Hk. f. & T. ... ii. 672, 702
Cortusa, *Linn.* ... ... iii. 501
Matthioli, *Linn.* ... ... „ 501
Corycium ? humile, Ham. ... vi. 107
Corydalis, *DC.* ... ... i. 121
adiantifolia, *Hk. f. & T.* ... „ 127
astragalina, Hk. f. & T. ... „ 126
cachemiriana, *Royle* ... „ 123
chærophylla, *DC.* ... ... „ 126
cornuta, *Royle* ... ... „ 126
crassifolia, *Royle* ... ... „ 127
crassissima, Camb. ... ... „ 127
crithmifolia, *Royle* ... ... „ 123
debilis, Edgew. ... ... „ 126
diphylla, Wall. ... ... „ 122
elegans, *Wall.* ... ... „ 124
epithymifolia, Walp ... „ 123
Falconeri, *Hk. f. & T.* ... „ 124
filiformis, Royle ... ... „ 125
flabellata, *Edgew.* ... ... „ 127
flaccida, *Hk. f. & T.* ... „ 122
geraniifolia, Hk. f. & T. ... „ 126
Gortschakovii, *Schr.* ... „ 125
Govaniana, *Wall.* ... ... „ 124
Griffithii, Boiss. ... ... „ 123
Hamiltoniana, D. Don ... „ 123
Hoffmeisteri, Klotz. ... ... „ 127
Impatiens, Fisch. ... ... „ 125
juncea, *Wall.* ... ... „ 123
latiflora, *Hk. f. & T.* ... „ 126
leptocarpa, *Hk. f. & T.* ... „ 122
longipes, DC. ... ... „ 125
longipes, D. Don ... ... „ 122
meifolia, *Wall.* ... ... „ 126
Moorcroftiana, *Wall.* ... „ 125
ophiocarpa, *Hk. f. & T.* ... „ 122

Corydalis Vol. Page
pauciflora, Edgew. ... ... i. 122
physocarpa, Camb. ... ... „ 127
polygalina, *Hk. f. & T.* ... „ 123
ramosa, *Wall.* ... ... „ 125
rutæfolia, *Sibth.* ... ... „ 122
sibirica, *Pers.* ... ... „ 125
stricta, *Stephan*... ... ... „ 126
tibetica, *Hk. f. & T.* ... „ 124
verticillaris, DC. ... ... „ 123
CORYLEÆ ... ... v. 599
Corylopsis, *Sieb. & Zucc.* ... ii. 427
himalayana, *Griff.* ... ... „ 427
multiflora, Hance ... ... „ 428
Corylus, *Linn.* ... ... v. 625
Colurna, *Linn.* ... ... , 625
ferox, *Wall.* ... ... „ 625
Jacquemontii, Dcne. ... „ 625
lacera, Wall. ... ... „ 625
Corymbis, *Thou.* ... ... vi. 91
brevistylis, *Hk. f.* ... ... „ 92
disticha, Lindl. ... ... „ 91
longiflora, *Hk. f.* ... ... „ 92
rhytidocarpa, *Hk. f.* ... „ 92
veratrifolia, *Rchb. f.* ... „ 91
Corymborchis assamica, Bl.... vi. 91
veratrifolia, Bl.... ... ... „ 91
Corynandra pulchella, Schrad. i. 170
Corypha, *Linn.* ... ... vi. 428
elata, *Roxb.* ... ... „ 428
Gebanga, Kurz ... ... „ 428
macropoda, *Kurz* ... ... „ 429
Martiana, *Becc.* ... ... „ 429
Saribus, Lour. ... ... „ 435
Taliera, *Roxb.* ... ... „ 428
umbraculifera, *Linn.* ... „ 428
umbraculifera, Wall. ... „ 429
CORYPHEÆ ... ... vi. 404
Corysanthera elliptica, Wall. iv. 373
vestita, Griff. ... ... „ 373
sp., Griff. ... ... „ 374
Corysanthes, *Br.* ... ... vi. 118
fornicata, *Lindl.* ... ... „ 118
picta, *Lindl.* ... ... „ 118
Coryzadenia trifoliata, Griff. i. 460
Coscinium, *Colebr.* ... ... i. 98
Blumeanum, *Miers* ... ... „ 99
fenestratum, *Colebr.* ... „ 99
Wallichianum, Miers ... „ 99
Wightianum, Miers... ... „ 99
Cosmos sulphureus, Cav. ... iii. 310
Cosmostigma, *Br.* ... ... iv. 46
acuminatum, Wight ... „ 46
racemosum, *Wight* ... ... „ 46
Costus, *Linn.* ... ... vi. 249
arabicus, Jacq. ... ... „ 250
arabicus, Linn. ... ... „ 253
argyrophyllus, Wall. ... „ 250

Costus Vol. Page
globosus, *Bl.* ... ... vi. 250
Kingii, *Baker* ... ... „ 250
malaccensis, Kœn. ... ... „ 255
nipalensis, Rosc. ... ... „ 250
speciosus, *Sm.* ... ... „ 249
Cotoneaster, *Linn.* ... ... ii. 384
acuminata, *Lindl.* ... ... „ 385
affinis, DC. ... ... „ 387
? *affinis*, Hohen. ... ... „ 385
affinis, Lindl. ... ... ii. 383, 385
alpina, Hort. ... ... ii. 386
bacillaris, *Wall.* ... ... „ 384
buxifolia, *Wall.* ... ... „ 387
congesta, Baker... ... ... „ 387
emarginata, Hoffm. ... „ 387
frigida, *Wall.* ... ... „ 385
lanata, Hort. ... ... „ 387
Lindleyi, Steud. ... ... „ 386
microphylla, *Wall.* ... ... „ 387
microphylla, Wall. ... ... „ 387
multiflora, *Bunge* ... ... „ 386
nepalensis, Hort. ... ii. 385, 386
nummularia, *Fisch. & Mey.* ii. 386
obtusa, Wall. ... ... ii. 384, 385
prostrata, Baker ... ... ii. 386
rosea, Edgew. ... ... „ 385
rotundifolia, *Wall.* ... ... „ 386
rotundifolia, Str. & Wint. ii. 385
Royleana, Hort. ... ... „ 385
Roylei, Hort. ... ... ii. 385, 386
Simonsii, *Hort.* ... ... ii. 386
thymifolia, *Hort.* ... ... „ 387
vulgaris, *Lindl.* ... ... „ 385
sp., Str. & Wint. ... ... „ 386
Cottonia, *Wight* ... ... vi. 26, 178
Championi, Lindl. ... ... vi. 26
macrostachya, *Wight* ... „ 26
peduncularis, Rchb. f. ... „ 26
Cotula, *Linn.* ... ... iii. 316
anthemoides, *Linn.* ... „ 316
aurea, *Linn.* ... ... „ 316
bicolor, Roth ... ... „ 245
conica, Wall. ... ... „ 307
dichrocephala, Clarke ... „ 246
dichrocephala, Sch.... ... „ 316
hemisphærica, *Wall.* ... „ 316
latifolia, Pers. ... ... „ 245
maderaspatana, Willd. ... „ 247
minima, Willd. ... ... „ 317
Russeliana, Wall. ... ... „ 317
sinapifolia, Roxb. iii. 245, 246, 259
Sphæranthus, Link. ... ... iii. 247
sternutatoria, Wall. ... ... „ 317
Cotylanthera, *Bl.* ... ... iv. 94
paucisquama, *Clarke* ... „ 94
tenuis, Bl. ... ... „ 95
Cotyledon, *Linn.* ... ... ii. 416

Cotyledon Vol. Page
amplexicaulis, Heyne ... ii. 415
corymbosa, Hb. Rottl. ... „ 415
heterophylla, Roxb. ... ... „ 415
hirsuta, Hb. Heyne ... ... „ 414
laciniata, Roxb. ... ... „ 415
Oreades, *Clarke* ... ... „ 416
pinnata, Lamk. ... ... „ 413
rhizophylla, Roxb. ... ... „ 413
spathulata, *Clarke* (see Errata) ... ... „ 416
spinosa, *Linn.* ... ... „ 416
Courtoisia, *Nees* ... ... vi. 625
cyperoides, *Nees* ... ... „ 625
Cousinia, *Cass.* ... ... iii. 359
auriculata, *Boiss.* ... ... „ 360
aralensis (*avalensis*), Bunge „ 360
Brandisii, Clarke ... ... „ 360
calcitrapiformis, J. & S. ... „ 360
Falconeri, *Hk. f.* ... ... „ 360
? *Hystrix*, Clarke ... ... „ 361
microcarpa, *Boiss.* ... ... „ 360
minuta, *Boiss.* ... ... „ 359
Thomsoni, *Clarke* ... ... „ 360
Covellia assamica, Miq. ... v. 523
aurata, Miq. ... ... „ 531
conglomerata, Miq. ... ... „ 523
courtallensis, Miq. ... ... „ 523
Cunia, Miq. ... ... „ 523
dæmonum, Miq. ... ... „ 522
dasycarpa, Miq. ... ... „ 523
dasycaula, Miq. (*lapsu* Ficus) „ 521
didynama, Miq. ... ... „ 525
glomerata, Miq. ... ... „ 536
Griffithii, Miq. ... ... „ 519
guttata, Wight ... ... „ 534
inæquiloba, Miq. ... ... „ 523
lanceolata, Miq. ... ... „ 536
lepidicarpa, Miq. ... ... „ 525
macrophylla, Miq. ... ... „ 534
microcarpa, Miq. ... ... „ 524
mollis, Miq. ... ... „ 536
oppositifolia, Gasp. ... ... „ 523
paniculata, Miq. ... ... „ 524
prostrata, Miq. ... ... „ 524
racemifera, Miq. ... ... „ 535
Ribes, Miq. ... ... „ 524
setulosa, Miq. ... ... „ 523
subopposita, Miq. ... ... „ 525
tuberculata, Miq. ... ... „ 525
volkhameriæfolia, Miq. ... „ 525
Wightiana, Miq. ... ... „ 523
Zollingeriana, Miq. (*lapsu* Ficus) ... ... v. 521
Cræpalia temulenta, Schrank vii. 364
Crambe, *Tourn.* ... ... i. 165
cordifolia, *Stev.* ... ... „ 165
Kotschyana, Boiss. ... ... „ 165
Craniospermum parviflorum, Dcne. ... ... iv. 171
Craniotome, *Rchb.* ... ... iv. 671
versicolor, *Rchb.* ... ... „ 671
Crassula, *Linn.* ... ... ii. 413
campestris, Harv. & Sond. „ 412
indica, *Dcne.* (see Errata) „ 413
pharnaceoides, Fisch. & Mey. „ 412
Schimperi, Fisch. & Mey. „ 412
CRASSULACEÆ ... ... ii. 411
Cratægus, *Linn.* ... ... ii. 383
Clarkei, *Hk. f.* ... ... „ 383
crenulata, *Roxb.* ... ... „ 384
cuspidata, Spach ... ... „ 375
glauca, Wall. ... ... „ 383
integrifolia, Herb. Ham. „ 387
monogyna, Boiss. ... ... „ 383
Oxyacantha, *Linn.* ... ... „ 383
Pyracantha, Brand. ... ... „ 384
ribesius, Bertol. ... ... „ 383
? *Shicola*, Ham. ... ... „ 371
Cratæva, *Linn.* ... ... i. 172
apetala, Spreng. ... ... „ 171
Marmelos, Linn. ... ... „ 517
Nurvala, Ham. ... ... „ 172
odora, Ham. ... ... „ 172
religiosa, *Forst.* ... ... „ 172
religiosa, Ainslie ... ... „ 517
religiosa, Ham. ... ... „ 172
Roxburghii, Br. ... ... „ 172
unilocularis, Ham. ... ... „ 172
Vallanga, Kœn. ... ... „ 516
CRATOXYLEÆ ... ... i. 252
Cratoxylon, *Bl.* ... ... i. 257
arborescens, *Bl.* ... ... „ 258
biflorum, Turcz ... ... „ 257
formosum, *Benth. & Hk. f.* „ 258
lanceolatum, Miq. ... ... „ 257
ligustrinum, Bl. ... ... „ 257
Maingayi, *Dyer* ... ... „ 258
neriifolium, *Kurz* ... ... „ 257
polyanthum, *Korth.* ... „ 257
prunifolium, *Dyer* ... ... „ 258
Wightii, Bl. ... ... „ 257
Crawfurdia, *Wall.* ... ... iv. 106
affinis, *Wall.* ... ... „ 107
affinis, Wall. ... ... „ 107
angustata, *Clarke* ... ... „ 106
Blumei, G. Don ... ... „ 107
campanulacea, *Wall. & Griff.* ... ... „ 106
fasciculata, *Wall.* ... ... „ 107
fasciculata, Griff. ... ... „ 108
fasciculata, Thw. ... ... , 108
fasciculata, Wall. ... ... „ 107
japonica, *Sieb. & Zucc.* ... „ 107
luteo-viridis, Clarke ... „ 108

Crawfurdia Vol. Page
puberula, *Clarke* ... ... iv. 107
speciosa, *Wall.* ... . „ 106
speciosa, Clarke ... ... „ 106
Cremanthodium, *Benth.* ... iii. 330
Decaisnei, *Clarke* ... ... „ 331
Hookeri, *Clarke* ... ... „ 331
oblongatum, *Clarke* ... ... „ 331
palmatum, *Benth.* ... ... „ 331
pinnatifidum, *Benth.* ... „ 332
reniforme, *Benth.* ... ... „ 330
Thomsoni, *Clarke* ... ... „ 331
Cremastra, *Lindl.* ... vi. 16, 178
Wallichiana, *Lindl.* ... vi. 16
Cremostachys fulva, Tulasne v. 378
Crepidium flavescens, Bl. ... v. 690
Rheedii, Bl. ... ... „ 688
Crepis, *Linn.* ... ... iii. 393
acaulis, *Hk. f.* ... ... „ 396
austriaca, Jacq. ... ... „ 394
blattarioides, *Vill.* ... ... „ 394
depressa, *Hk. f. & T.* ... „ 397
flexuosa, Clarke... ... ... „ 394
fœtida, *Linn.* ... ... „ 393
fuscipappa, *Benth.* ... ... „ 395
glauca, *Benth.* ... ... „ 394
glomerata, *Benth. & Hk. f.* „ 398
glomerata, Clarke ... ... „ 397
glomerata, Wall. ... ... „ 376
gracilipes, *Hk. f.* ... ... „ 396
gracilis, *Hk. f. & T.* ... „ 395
Hookeriana, Clarke ... ... „ 398
japonica, *Benth.* ... ... „ 395
Kotschyana, Clarke ... ... „ 393
lyrata, Clarke ... ... „ 395
microcephala, Clarke ... „ 415
multicaulis, Led. ... ... „ 396
porrifolia, D. Don ... ... „ 398
præmorsa, Froel. ... ... „ 396
primulifolia, Hk. f. & T. ... „ 395
pulchra, Linn. ... ... „ 398
racemifera, *Hk. f.* ... ... „ 397
sibirica, *Linn.* ... ... „ 394
silhetensis, *Hk. f.* ... ... „ 397
Stoliczkai, *Clarke* ... ... „ 396
tenuifolia, *Willd.* ... ... „ 395
youngiformis, Koch ... ... „ 398
sp., Hk. f. & T. ... ... „ 397
Cressa, *Linn.* ... ... iv. 225
australis, Br. ... ... „ 225
cretica, *Linn.* ... ... „ 225
indica, Retz. ... ... „ 225
latifolia, T. Anders. ... „ 224
CRESSEÆ... ... ... iv. 180
Crinum, *Linn.* ... ... vi. 280
amœnum, *Roxb.* ... ... „ 282
asiaticum, *Linn.* ... ... „ 280
asiaticum, Roxb. ... ... „ 281

Crinum Vol. Page
asiaticum, Wall. ... vi. 283, 284
brachynema, *Herb.* ... ... vi. 284
bracteatum, Bot. Reg. ... „ 284
bracteatum, Willd. ... ... „ 284
brevifolium, Roxb. ... ... „ 284
canaliculatum, Carey ... „ 284
canalifolium, Herb. ... „ 284
canalifolium, Carey ... ... „ 283
Careyanum, Herb. ... ... „ 283
defixum, *Ker* ... ... „ 281
elegans, Carey ... ... „ 283
ensifolium, *Roxb.* ... ... „ 281
erythrophyllum, Carey ... „ 284
Herbertianum, Schult. ... „ 284
Herbertianum, Wall. ... „ 283
humile, *Herb.* ... ... „ 282
insigne, Schult. ... ... „ 283
latifolium, *Linn.* ... ... „ 283
Linnæi, Roem. ... ... „ 283
longifolium, Roxb. ... ... „ 282
lorifolium, Roxb. ... ... „ 283
macrocarpum, *Carey* ... „ 284
moluccanum, Roxb. ... ... „ 283
ornatum, Herb. ... ... „ 283
pauciflorum, Miq. ... ... „ 285
pedunculatum, Br. ... ... „ 284
pratense, *Herb.* ... ... „ 282
procerum, Carey ... ... „ 281
pusillum, *Herb.* ... ... „ 282
Roxburghii, Grah. ... ... „ 281
speciosissimum, Herb. ... „ 283
speciosum, Herb. ... ... „ 283
stenophyllum, *Baker* ... „ 281
Stracheyi, *Baker* ... ... „ 282
strictum, *Herb.* ... ... „ 284
sumatranum, Roxb. ... ... „ 284
toxicarium, Roxb. ... ... „ 280
umbellatum, Carey ... ... „ 284
venustum, Carey ... ... „ 283
Wallichianum, Roem. ... „ 283
Wattii, *Baker* ... ... „ 281
zeylanicum, Linn. ... vi. 283, 284
sp., Wall. ... ... vi. 281
Critho Aegiceras, E. Mey. ... vii. 371
Crocus, *Linn.* ... ... vi. 276
sativus, *Linn.* ... ... „ 276
Crossandra, *Salisb.* ... ... iv. 492
axillaris, Nees ... ... „ 492
coccinea, Dalz. & Gibs. ... „ 492
infundibuliformis, Nees ... „ 492
oppositifolia, Nees ... ... „ 492
undulæfolia, *Salisb.* ... „ 492
Crotalaria, *Linn.* ... ... ii. 65
acicularis, *Ham.* ... ... „ 68
acuminata, G. Don ... ... „ 77
affinis, DC. ... ... „ 83
alata, *Ham.* ... ... „ 69

Crotalaria Vol. Page
albida, *Heyne* ... ii. 71
angulosa, Lamk. ... „ 77
anthylloides, D. Don ... „ 72
anthylloides, Lam. ... „ 73
Arnottiana, Benth. ... „ 78
assamica, *Benth.* ... „ 75
barbata, *Grah.* ... „ 76
benghalensis, Lamk. ... „ 79
bialata, Roxb. ... „ 69
bifaria, *Linn.* ... „ 69
bifaria, Wall. ... „ 69
biflora, *Linn.* ... „ 66
biflora, Herb. Madr. ... „ 71
bracteata, *Roxb.* ... „ 83
brevipes, Champ. ... „ 73
Brownei, Rchb. ... „ 84
Burhia, *Ham.* ... „ 66
Burmanni, DC. ... „ 75
cæspitosa, Roxb. ... „ 72
calycina, *Schrank* ... „ 72
Campbellii, Arn. ... „ 81
candicans, W. & A. ... „ 79
canescens, Wall. ... „ 68
capitata, *Benth.* ... „ 74
Cephalotes, Herb. Madr. ... „ 73
chinensis, *Linn.* ... „ 73
chinensis, Lamk. ... „ 81
chinensis, Roxb. ... „ 70
clavata, *W. & A.* ... „ 83
cœrulea, Jacq. ... „ 77
crassifolia, Ham. ... „ 68
crinita, Grah. ... „ 72
cuneifolia, Schrank ... „ 75
cytisoides, Roxb. ... „ 65
cytisoides, Wight ... „ 83
dichotoma, Roth ... „ 69
digitata, *Hook.* ... „ 85
digitata, Wight ... „ 85
disticha, Zolling. ... „ 68
divaricata, Grah. ... „ 81
dubia, *Grah.* ... „ 73
elegans, Bedd. ... „ 74
elliptica, Roxb. ... „ 85
epunctata, Dalz. ... „ 71
eriantha, Sieb. & Zucc. ... „ 73
evolvuloides, *Wight* ... „ 68
fenestrata, Sims ... „ 79
ferruginea, *Grah.* ... „ 68
filiformis, *Wall.* ... „ 66
filipes, *Benth.* ... „ 66
foliosa, Willd. ... „ 81
formosa, *Grah.* ... „ 76
fulva, *Roxb.* ... „ 80
genistoides, Willd. ... „ 82
glabrescens, Benth. ... „ 79
globosa, *W. & A.* ... „ 66
globulosa, Wight ... „ 66

Crotalaria Vol. Page
Grahamiana, *W. & A.* ... ii. 85
grandiflora, Zoll. ... „ 78
grandis, Hort. ... „ 80
herbacea, Schweig. ... „ 83
herniarioides, W. & A. ... „ 81
heterophylla, Linn. ... „ 85
Heyneana, *Grah.* ... „ 78
hirsuta, *Willd.* ... „ 68
hirsuta, Roxb. ... „ 70
hirsuta, Wall. ... „ 68
hirta, *Willd.* ... „ 70
hirta, Roth. ... „ 66
Hookeri, Arn. ... „ 84
humifusa, *Grah.* ... „ 67
incana, *Linn.* ... „ 83
juncea, *Linn.* ... „ 79
Kurzii, *Baker* ... „ 75
laburnifolia, *Linn.* ... „ 84
laburnoides, Klotz. ... „ 84
lævigata, *Lamk.* ... „ 83
lanata, *Bedd.* ... „ 77
latifolia, Hort. Calc. ... „ 84
leioloba, Bartl. ... „ 68
leptostachya, *Benth.* ... „ 78
Leschenaultii, *DC.* ... „ 76
linearis, Hb. Madr. ... „ 72
linifolia, *Linn. f.* ... „ 72
longipes, *W. & A.* ... „ 76
lunulata, *Heyne* ... „ 80
lupiniflora, Grah. ... „ 76
lutescens, *Dalz.* ... „ 74
luxurians, Benth. ... „ 81
macrophylla, Weinm. ... „ 75
macrophylla, Willd. ... „ 229
macropoda, A. Rich. ... „ 83
macrostyla, D. Don ... „ 144
madurensis, *Wight* ... „ 79
medicaginea, *Lamk.* ... „ 81
medicaginea, DC. ... „ 82
medicaginea, Ham. ... „ 81
melanocarpa, Wall. ... „ 72
montana, Heyne ... „ 72
montana, Roxb. ... „ 71
multiflora, *Benth.* ... „ 69
mysorensis, *Roth* ... „ 70
nana, *Burm.* ... „ 71
neglecta, W. & A. ... „ 81
nepalensis, Link ... „ 73
neriifolia, *Wall.* ... „ 74
? *nervosa*, Grah. ... „ 153
Notonii, *W. & A.* ... „ 82
nummularia, Willd. ... „ 66
obliqua, Wall. ... „ 68
obtecta, *Grah.* ... „ 79
occulta, *Grah.* ... „ 72
Oldhami, Miq. ... „ 73
orixensis, *Rottl.* ... „ 83

Crotalaria Vol. Page
ovalifolia, Wall. ... ... ii. 70
pallida, Klotz. ... ... „ 84
paniculata, *Willd.* ... ... „ 81
parva, Grah. ... ... „ 71
patula, Grah. .. .. „ 71
peduncularis, *Grah.* ... „ 74
peduncularis, Dalz. & Gibs. ... ... „ 74
pedunculosa, Desv. ... ... „ 84
peguana, *Benth.* ... ... „ 77
pellita, Bert. ... ... „ 81
pendula, Bert. ... ... „ 84
pilosa, Roxb. ... ... „ 70
pilosissima, Miq. ... ... „ 68
pisiformis, Guill. & Perr. „ 84
porrecta, Wall. ... ... „ 79
priestleyoides, *Benth.* ... „ 74
procumbens, Roxb. ... ... „ 81
prostrata, *Roxb.* ... ... „ 67
prostrata, Wight ... ... „ 67
pulcherrima, *Roxb.* ... „ 80
pulchra, Andr. ... ... „ 80
pulchra, DC. ... ... „ 80
punctata, Grah. ... ... „ 71
pusilla, *Heyne* ... ... „ 70
quinquefolia, *Linn.* ... ... „ 84
ramosissima, *Roxb.* ... ... „ 80
retusa, *Linn.* ... ... „ 75
rhizophylla, Grah. ... ... „ 72
rigida, *Heyne* ... ... „ 82
rostrata, W. & A. ... ... „ 82
Rothiana, DC. ... ... „ 66
Rothii, Spreng. ... ... „ 66
Roxburghiana, DC. ... ... „ 72
rubiginosa, *Willd.* ... ... „ 69
rubiginosa, Roxb. ... ... „ 69
sagitticaulis, Wall. ... ... „ 69
salicifolia, *Heyne* ... ... „ 77
Saltiana, Andr. ... ... „ 84
saxatilis, Zolling. ... ... „ 72
scabrella, W. & A. ... ... „ 70
Schimperi, A. Rich. ... „ 83
scoparia, Wall. ... ... „ 71
semperflorens, *Vent.* ... „ 78
semperflorens, Benth. ... „ 78
sericea, *Retz.* ... ... „ 75
sericea, Burm. ... ... „ 75
sericea, Willd. ... ... „ 79
sessiliflora, *Linn.* ... ... „ 73
sobolifera, Grah. ... ii. 71, 72
spartioides, Spreng. ... ii. 82
speciosa, *Heyne* ... ... „ 73
spectabilis, Roth ... ... „ 75
stenophylla, Vogel ... ... „ 72
stipitata, Grah. ... ii. 82, 83
stipulacea, Roxb. ... ... ii. 70
Stocksii, *Benth.* ... ... „ 67

Crotalaria Vol. Page
striata, *DC.* ... ... ii. 84
stricta, Roth ... ... „ 82
stricta, Roxb. ... ... „ 72
subperfoliata, *Wight* ... „ 79
tecta, *Roth* ... ... „ 72
tenuifolia, Roxb. ... ... „ 79
tenuis, Wall. ... ... „ 71
tetragona, *Roxb.* ... ... „ 78
tetragona, Wall. ... ... „ 79
tomentosa, Rottl. ... ... „ 81
trichophora, *Benth.* ... „ 67
triflora, Heyne ... ... „ 69
trifoliastrum, *Willd.* ... „ 82
trifoliastrum, Wall. ... ... „ 82
triquetra, *Dalz.* ... ... „ 71
tuberosa, Ham. ... ... „ 219
umbellata, Wight ... ... „ 71
uniflora, Koen. ... ... „ 65
Vachelii, H. & A. ... ... „ 85
vasculosa, Grah. ... ... „ 85
venusta, Wall. ... ... „ 73
verrucosa, *Linn.* ... ... „ 77
vestita, *Baker* ... ... „ 67
viminea, Wall. ... ... ii. 72, 79
virgata, Mart. ... ... ii. 81
virgata, Roxb. ... ... „ 82
Walkeri, Arn. ... ... „ 78
Wallichiana, W. & A. ... „ 78
Wightiana, Grah. ... ... „ 70
Wightiana, Wall. ... ... „ 70
Willdenoviana, *DC.* ... „ 81
Croton, *Linn.* ... ... v. 385
ardisioides, *Hk. f.* ... ... „ 393
argenteus, Forsk. ... ... „ 409
argutus, Heyne ... ... „ 392
argyratus, *Bl.* ... ... „ 385
aromaticus, *Linn.* ... ... „ 338
aromaticus, Muell. ... ... „ 388
aromaticus, Wall. ... ... „ 390
asper, Koen. ... ... „ 409
atrovirens, Hb. Madr. ... „ 441
bacciferus, Wall. ... ... „ 442
bicolor, Roxb. ... ... „ 385
birmanicus, *Muell.* ... ... „ 389
Boragatch, Roxb. ... ... „ 387
bractiferus, Roxb. ... ... „ 399
cardiospermus, Gærtn. ... „ 395
cascarilloides, Rauesch ... „ 443
castaneifolius, Wall. ... „ 434
caudatus, *Geisel.* ... ... „ 388
caudatus, Muell. ... ... „ 392
Chiamala, Wall. ... ... „ 422
chinensis, Benth. ... ... „ 389
chlorocalyx, *Wall.* .. ... „ 394
chrozophoroides, Kurz ... „ 389
coccineus, Vahl... ... ... „ 442
coccineus, Wall. ... ... „ 441

Croton ... Vol. Page
calococcus (cœlococcus), *Kurz* ... v. 389
crassifolius, Geisel. ... „ 389
? *cyanospermus*, Gærtn. ... „ 305
denticulatus, Bl. ... „ 388
denticulatus, Wall. ... „ 391
diadenus, Miq. ... „ 391
distans, Wall. ... „ 443
drupaceus, Roxb. ... „ 388
? *drupaceus*, Wall. ... „ 390
Dudia, Ham. ... „ 387
elæocarpifolius, Wall. ... „ 387
erythrostachys, *Hk. f.* ... „ 391
flocculosus, *Kurz* ... „ 394
Gibsonianus, *Nimmo* ... „ 392
glabellus, Heyne ... „ 403
Griffithii, *Hk. f.* ... „ 392
hastatus, Burm. ... „ 409
hastatus, Linn. ... „ 465
hypoleucus, Dalz. ... „ 386
Jamalgota, Ham. ... „ 393
Jouffra, Miq. ... „ 387
Joufra, *Roxb.* ... „ 387
Klotzschianus, *Wight* ... „ 392
lacciferus, Blanco ... „ 447
lacciferus, Muell. ... „ 388
lacciferus, Linn. ... „ 388
lacciferus, Wall. ... „ 442
lætus, Wall. ... „ 425
lævifolius, *Bl.* ... „ 391
lævigatus, Wall. ... v. 282, 387
Lawianus, *Nimmo* ... v. 394
leiophyllus, Muell. ... „ 391
longifolius, Wall. ... „ 396
malabaricus, *Bedd.* ... „ 386
mollissimus, Geisel. ... „ 430
moluccanus, Willd. ... „ 409
montanus, Wall. ... „ 425
montanus, Willd. ... „ 443
Moonii, *Thw.* ... „ 390
muricatus, Heyne ... „ 436
nervosus, Rottl. & Willd., *lapsu* A. ... „ 440
nigro-viridis, *Thw.* ... „ 393
obliquus, Vahl ... „ 409
oblongifolius, *Roxb.* ... „ 386
oblongifolius, Del. ... „ 409
oblongifolius, Ham. ... „ 387
oblongifolius, Wall. ... „ 387
paniculatus, Lamk. ... „ 430
Pavana, Ham. ... „ 393
pedunculatus, Wall. ... „ 287
persimilis, Muell. ... „ 387
philippensis, Lamk. ... „ 442
pictus, Wall. ... „ 399
plicatus, Roxb. ... „ 410
plicatus, Vahl ... „ 409

Croton ... Vol. Page
polyandrus, Roxb. ... v. 462
polycarpus, Hort. Calc. ... „ 409
punctatus, Moon ... „ 390
punctatus, Retz. ... „ 442
ramiflorus, *Grah.* ... „ 395
repandus, Willd. ... „ 442
reticulatus, *Heyne* ... „ 386
reticulatus, Willd. ... „ 440
rhamnifolius, Willd. ... „ 440
Rheedei, *Grah.* ... „ 395
rhodostachyus, *Muell.* ... „ 391
rhombifolius, Willd. ... „ 442
ricinoides, Pers. ... „ 430
robustus, *Kurz* ... „ 387
Rottleri, Geisel. ... „ 409
Rottleri, Thw. ... „ 410
salicifolius, Geisel. ... „ 455
scabiosus, *Bedd.* ... „ 386
sebiferus, Linn. ... „ 470
solanifolius, Geisel. ... „ 462
spinosus, Linn. ... „ 457
sublyratus, *Kurz* ... „ 390
tabacifolius, Geisel. ... „ 395
Thwaitesianus, Muell. ... „ 392
Tiglium, *Linn.* ... „ 393
tiliæfolius, Lam. ... „ 384
tinctorius, Wall. ... „ 409
tinctorius, Burm. ... „ 409
tomentosus, *Muell.* ... „ 389
umbellatus, Dalz. & Gibs. ... „ 403
umbellatus, Heyne ... „ 392
umbellatus, Willd. ... „ 402
umbellatus, Wight ... „ 402
urens, Linn. ... „ 465
variegatus, Linn. ... „ 399
Wallichii, *Muell.* ... „ 390
zeylanicus, Muell. ... „ 386
sp., Wall. ... v. 387, 390, 434
CROTONEÆ ... v. 242
Crozophora. (See *Chrozophora*.)
CRUCIFERÆ ... i. 128
Crudia, *Schreb.* ... ii. 271
zeylanica, *Benth.* ... „ 271
Cryphea erecta, Ham ... v. 100
Crypsis aculeata, Ait. ... vii. 235
aculeata, Duthie ... „ 235
arenaria, Desf. ... „ 237
compacta, Steud. ... „ 235
dura, Boiss. ... „ 236
maritima, Munro ... „ 249
nilaica, Fres. & Notar ... „ 235
phalaroides, Duthie ... „ 236
schœnoides, Lamk. ... „ 235
vaginiflora, Opiz ... „ 235
Crypteronia, *Bl.* ... ii 573
Cumingii, Planch. ... „ 574
glabra, *Bl.* ... „ 574

	Vol.	Page
Crypteronia		
Griffithii, *Clarke*	ii.	574
paniculata, Bl.	„	574
paniculata, Kurz	„	574
pubescens, *Bl.*	„	574
Cryptocarya, *Br.*	v.	117
amygdalina, *Nees*	„	118
andamanica, *Hk. f.*	„	118
? Andersoni, *King*	„	120
cæsia, *Bl.*	„	119
caudata, Meissn.	„	117
costata, Bl.	„	121
crassinervia, Miq.	„	118
cuneata, Bl.	„	125
enervis, *Hk. f.*	„	119
Ferrarsi, *King*	„	118
ferrea, *Bl.*	„	119
ferrea, Kurz	„	119
floribunda, Miq.	„	141
floribunda, Nees	„	118
floribunda, Wight	„	120
Griffithiana, *Wight*	„	117
impressa, *Miq.*	„	117
infectoria, Meissn.	„	117
Kurzii, *Hk. f.*	„	119
membranacea, *Thw.*	„	120
neilgherriensis, Meissn.	„	120
rugulosa, *Hk. f.*	„	118
Stocksii, *Meissn.*	„	120
tomentosa, Hort. Calc.	„	118
venosa, Meissn.	„	117
Wightiana, *Thw.*	„	120
sp.	„	121
Cryptochilus, *Wall.*	v.	827
lutea, *Lindl.*	„	827
Meirax, Par. & Rchb. f.	„	786
reticulata, Rchb. f.	„	786
sanguinea, *Wall.*	„	827
Cryptocoryne, *Fisch.*	vi.	492
affinis, *N. E. Br.*	„	494
Beckettii, *Thw.*	„	493
ciliata, *Fisch.*	„	492
cognata, *Schott*	„	494
consobrina, *Schott*	„	493
cordata, *Griff.*	„	493
Dalzellii, *Schott*	„	495
drymorhiza, Zipp.	„	492
elata, Griff.	„	492
elliptica, *N. E. Br.*	„	495
Gomezii, *Schott*	„	495
Griffithii, *Schott*	„	493
Huegelii, *Schott*	„	494
Kœnigii, Schott.	„	496
lancifolia, Schott	„	496
ovata, Schott	„	495
retrospiralis, *Kunth*	„	493
Roxburghii, *Schott*	„	494
Roxburghii, Dalz. & Gibs.	„	494

	Vol.	Page
Cryptocoryne		
spiralis, *Fisch.*	vi.	494
spiralis, Thw.	„	492
Thwaitesii, *Schott*	„	495
unilocularis, Schott	„	493
unilocularis, Wight	„	494
Walkeri, *Schott*	„	492
Wightii, *Schott*	„	493
sp., Griff.	„	493
Cryptolepis, *Br.*	iv.	5
Buchanani, *R. & S.*	„	5
elegans, *Wall.*	„	6
filiformis, Wall.	„	9
grandiflora, *Wight*	„	5
laxiflora, Bl.	„	6
pauciflora, Wight	„	6
reticulata, Wall.	„	5
Wightiana, Wall.	„	6
Cryptonema malaccensis, Turcz.	v.	665
Cryptophragmium axillare, Nees	iv.	510
canescens, Nees	„	509
cordifolium, Nees	„	502
elongatum, Nees	„	502
glabrum, Dalz.	„	509
latifolium, Dalz.	„	510
sanguinolentum, Nees	„	510
serrulatum, Nees	„	509
venustum, Nees	„	508
Cryptostegia, *Br.*	iv.	6
grandiflora, *Br.*	„	6
Cryptostylis, *Br.*	vi.	117
Arachnites, *Bl.*	„	118
Cryptotheca apetala, Bl.	ii.	569
dichotoma, Bl.	„	571
Crytoceras, vide *Cyrtoceras*	iv.	52
Ctenium digitatum, Spreng.	vii.	290
indicum, Spreng.	„	291
seychellense, Baker	„	284
Ctenolepis, *Hk. f.*	ii.	629
cerasiformis, *Naud.*	„	630
Garcini, *Naud.*	„	629
Ctenolophon, *Oliv.*	i.	577
grandifolius, *Oliv.*	„	577
parvifolius, *Oliv.*	„	577
Cubeba canina, Miq.	v.	82
lanata, Miq.	„	82
Lowong, Miq.	„	82
macrostachya, Miq., vide *Piper*	„	85
Neesii, Miq.	„	81
sumatrana, Miq.	„	81
Wallichii, Miq.	„	81
Cubospermum palustre, Lour.	ii.	587
Cucubalus, *Linn.*	i.	221
bacciferus, *Linn.*	„	222
Behen, Linn.	„	218

Vol. Page
Cuculla ... vi. 33
CUCUMERINEÆ ... ii. 604
Cucumis, *Linn.* ... ii. 619
  acutangulus, Wall. ... „ 615
  africanus, Lindl. ... „ 617
  Chaeta, Wall. ... „ 620
  cicatrisatus, Stocks ... „ 620
  Citrullus, DC. ... „ 621
  Colocynthis, Linn. ... „ 620
  eriocarpus, Boiss. ... „ 619
  flexuosus, Linn. ... „ 620
  Gurmia, Wall. ... „ 620
  Hardwickii, Royle ... „ 620
  integrifolius, Roxb. ... „ 612
  maculatus, Willd. ... „ 620
  maderaspatanus, Linn. ... „ 623
  maderaspatanus, Roxb. ... „ 619
  Melo, *Linn.* ... „ 620
  Missionis, Wall. ... „ 609
  muricatus, Wall. ... „ 620
  prophetarum, *Linn.* ... „ 619
  Pseudo-colocynthis, Royle „ 619
  pubescens, Thw. ... „ 619
  pubescens, Wall. ... „ 619
  sativus, *Linn.* ... „ 620
  trigonus, *Roxb.* ... „ 619
  turbinatus, Roxb. ... „ 619
  utilissimus, Roxb. ... „ 620
  verrucosus, Hb. Rottl. ... „ 623
Cucurbita, *Linn.* ... ii. 621
  Camolenga, Wall. ... „ 622
  Citrullus, Linn. ... „ 621
  farinosa, Bl. ... „ 616
  ficifolia, Wall. ... „ 608
  hispida, Wall. ... „ 616
  Lagenaria, Linn. ... „ 613
  maxima, *Duchesne* ... „ 622
  maxima, W. & A. ... „ 622
  Melopepo, Roxb. ... „ 622
  Melopepo, Wall. ... „ 607
  moschata, *Duchesne* ... „ 622
  Pepo, *DC.* ... „ 622
  Pepo, Lour. ... „ 616
  umbellata, Heyne ... „ 616
  umbellata, Wall. ... „ 611
Cucurbitacea, Wall. ... ii. 633
CUCURBITACEÆ ... ii. 604
Cudrania, *Trecul* ... v. 538
  amboinensis, Kurz ... „ 538
  fruticosa, Wight ... „ 539
  javanensis, *Trecul* ... „ 538
  pubescens, *Trecul* ... „ 539
Cudranus amboinensis, Miq. v. 538
  Rumphii, Thw. ... „ 538
  sp., Rumph ... „ 538
Cullenia, *Wight* ... i. 350
  excelsa, *Wight* ... „ 350

Vol. Page
Cuminum, *Linn.* ... ii. 717
  Cyminum, *Linn.* ... „ 718
  Cyminum, Wall. ... „ 717
? *Cuncea trifida*, Ham. ... iii. 129
Cunila Buchanani, Spreng. iv. 647
  nepalensis, D. Don ... „ 647
Cunoniaceæ, Griff. ... ii. 440
Cupania, *Plum.* ... i. 676
  acuta, *Hiern* ... „ 677
  adenophylla, *Planch.* i. 677, 685
  canescens, Pers. ... i. 671, 679
  edulis, Sch. & Thonn. ... i. 685
  fuscidula, *Kurz* ... „ 677
  glabrata, *Kurz* ... i. 676, 685
  Helferi, *Hiern* ... i. 679
  Jackiana, *Hiern* ... „ 678
  Jackiana, Hiern ... ii. 54
  Lessertiana, *Camb.* ... i. 678, 681
  Mischocarpus, Steud. ... i. 678
  pallidula, *Hiern* ... „ 676
  pentapetala, *W. & A.* i. 678, 681
  pentaphylla, Wight ... i. 678
  pleuropteris, *Bl.* ... „ 677
  regularis, Bl. ... „ 676
  Roxburghii, Wight ... „ 678
  sumatrana, *Miq.* ... „ 678
  sp., Hk. f. & T. ... i. 671, 679
  sp., Wall. i. 552, 556, 671, 679, 689
Cupia auriculata, DC. ... iii. 108
  corymbosa, DC. ... „ 102
  densiflora, DC. ... „ 112
  macrophylla, DC. ... „ 102
  oppositifolia, DC. ... „ 112
  truncata, DC. ... „ 94
CUPRESSINÆ ... v. 644
Cupressus, *Linn.* ... v. 645
  Doniana, Hort. ... „ 645
  fastigiata, DC. ... „ 645
  funebris, *Endl.* ... „ 646
  glauca, Lamk. ... „ 645
  horizontalis, Mill. ... „ 645
  lusitanica, Mill. ... „ 645
  pendula, Staunton ... „ 646
  pyramidalis, Targ. ... „ 645
  Roylei, Carr. ... „ 645
  sempervirens, *Linn.* ... „ 645
  torulosa, *D. Don* ... „ 645
  Whitleyana, Carr. ... „ 645
CUPULIFERÆ ... v. 598
Curanga, *Juss.* ... iv. 275
  amara, *Juss.* ... „ 275
Curata pala, Rheede ... iii. 648
Curculigo, *Gærtn.* ... vi. 278
  brevifolia, Dryand. ... „ 279
  crassifolia, *Hk. f.* ... „ 279
  Finlaysoniana, *Wall.* ... „ 279
  gracilis, *Wall.* ... „ 278

Curculigo Vol. Page
graminifolia, Nimmo ... vi. 278
latifolia, *Dryand.* ... ... „ 280
malabarica, Wight ... ... „ 279
orchioides, *Gærtn.* ... ... „ 279
? *pauciflora*, Moon ... ... „ 279
recurvata, *Dryand.* ... „ 278
sumatrana, Roxb. ... ... „ 280
villosa, Wall. ... ... vi. 278, 280
Curcuma, *Linn.* ... ... vi. 209
æruginosa, *Roxb.* ... ... „ 212
albiflora, *Thw.* ... ... „ 215
Amada, *Roxb.* ... ... „ 213
amarissima, *Rosc.* ... ... „ 212
angustifolia, *Roxb.* ... ... „ 210
angustifolia, Dalz. & Gibs. „ 210
aromatica, *Salisb.* ... ... „ 210
attenuata, *Wall.* ... ... „ 213
cæsia, *Roxb.* ... ... „ 212
Careyana, Wall. ... ... „ 225
caulina, Grah. ... ... „ 224
coccinea, Wall. ... ... „ 216
comosa, *Roxb.* ... ... „ 211
cordata, Wall. ... ... „ 216
cordifolia, Roxb. ... ... „ 216
decipiens, *Dalz.* ... ... „ 215
elata, *Roxb.* ... ... „ 211
erubescens, Wall. ... ... „ 213
ferruginea, *Roxb.* ... ... „ 213
glaucophylla, Wall. ... ... „ 224
grandiflora, *Wall.* ... ... „ 216
Kunstleri, *Baker* ... ... „ 214
Kurzii, *King* ... ... „ 216
latifolia, *Rosc.* ... ... „ 211
leucorhiza, *Roxb.* ... ... „ 212
longa, *Linn.* ... ... „ 214
longa, Wall. ... ... „ 210
longiflora, Salisb. ... ... „ 213
longifolia, Wall. ... ... „ 246
montana, *Rosc.* ... ... „ 214
musacea, Wall.... ... ... „ 225
neilgherrensis, *Wight* ... „ 210
officinalis, Salisb. ... ... „ 211
oligantha, *Trim.* ... ... „ 215
ornata, *Wall.* ... ... „ 211
parviflora, *Wall.* ... ... „ 215
petiolata, *Roxb.* ... ... „ 216
plicata, *Wall.* ... ... „ 213
Pseudo-montana, Grah. ... „ 214
reclinata, *Roxb.* ... ... „ 214
Roscoeana, *Wall.* ... ... „ 216
rotunda, Linn. ... ... „ 220
rubescens, *Roxb.* ... ... „ 213
rubricaulis, Link ... ... „ 213
speciosa, Link ... ... „ 211
strobilifera, *Wall.* ... ... „ 216
strobilina, Wall. ... ... „ 216
Zedoaria, *Rosc.* ... ... „ 210
Curcuma Vol. Page
Zedoaria, Roxb. ... ... vi. 210
Zerumbet, Roxb. ... ... „ 210
Cuscuaria marantifolia, Schott ... ... vi. 543
Rumphii, Schott ... ... „ 543
spuria, Schott ... ... „ 543
Cuscuta, *Linn.* ... ... iv. 225
aggregata, Roxb. ... ... „ 227
anguina, Edgew. ... ... „ 226
arabica, Wight ... ... „ 226
Boissieri, Stocks ... ... „ 226
brevistyla, A. Rich. ... ... „ 227
capillaris, Edgew. ... ... „ 227
capillaris, Wall. ... ... „ 227
capitata, *Roxb.* ... ... „ 227
carinata, Br. ... ... „ 227
chinensis, *Lamk* ... ... „ 226
ciliaris, Hohen. ... ... „ 227
elatior, Chois. ... ... „ 226
europæa, *Linn.* ... ... „ 227
gigantea, *Griff.* ... ... „ 226
grandiflora, Wall. ... ... „ 226
Hookeri, Sweet ... ... „ 226
hyalina, *Roth* ... ... „ 226
hyalina, Wight ... ... „ 227
macrantha, G. Don ... ... „ 226
major, C. Bauh. ... ... „ 227
minor, C. Bauh. ... ... „ 227
oxypetala, Boiss. ... ... „ 226
planiflora, *Tenore* ... ... „ 227
reflexa, *Roxb.* ... ... „ 225
sulcata, Roxb. ... ... „ 227
sulcata, Wall. ... ... iv. 226, 227
verrucosa, Sweet ... ... iv. 226
CUSCUTEÆ ... ... iv. 180
Cussambium glabrum, Ham. i. 681
pubescens, Ham. ... ... „ 681
spinosum, Ham. ... ... „ 681
Cyamopsis, *DC.* ... ... ii. 92
psoralioides, *DC.* ... ... „ 92
Cyamus mysticus, Salisb. ... i. 116
Nelumbo, Sm. ... ... „ 116
Cyananthus, *Wall.* ... ... iii. 433
barbatus, Edgew. ... ... „ 434
Hookeri, *Clarke* ... ... „ 435
incanus, *Hk. f. & T.* ... ... „ 434
inflatus, *Hk. f. & T.* ... ... „ 435
integer, *Wall.* ... ... „ 434
linifolius, *Wall.* ... ... „ 434
linifolius, Hk. f. & T. ... „ 434
lobatus, *Wall.* ... ... „ 433
microphyllus, Edgew. ... „ 434
pedunculatus, *Clarke* ... „ 434
sp., Hk. f. & T. ... ... „ 435
Cyananthus, Griff. ... ... iv. 371
umbrosa, Griff. ... ... „ 371
Cyananthus, Miers ... ... v. 665

Cyananthus Vol. Page
pusilla, Miers ... v. 665
Cyanitis sylvatica, Reinw. ... ii. 406
? *Cyanodaphne cuneata*, Bl. v. 125
Cyanopis decurrens, Zoll. ... iii. 234
? *erigeroides*, DC. ... „ 244
pubescens, DC. ... iii. 235, 259
villosa, DC. ... iii. 235
Cyanospermum javanicum, Miq. ... ii. 220
tomentosum, W. & A. ... „ 222
Cyanotis, *D. Don* ... vi. 384
adscendens, Dalz. ... „ 386
arachnoidea, *Clarke* ... „ 386
axillaris, *R. & S.* ... „ 388
barbata, *D. Don* ... „ 385
Burmanniana, Wight ... „ 385
concanensis, Hassk. ... „ 386
cristata, *Schultes f.* ... „ 385
cristata, Linn. ... „ 385
cucullata, *Kunth* ... „ 389
decumbens, Wight ... „ 387
dichotricha, Stocks ... „ 387
disrumpens, Hassk. ... vi. 388, 389
eriantha, Hassk. ... vi. 388
fasciculata, *Schultes f.* ... „ 387
fasciculata, Wall. ... vi. 385, 386
glaberrima, Hassk. ... vi. 385
hirtella, Miq. ... „ 385
hispida, Dalz. ... „ 385
Hugelii, Hassk. ... „ 385
incerta, *Hassk.* ... „ 389
karliana, *Hassk.* ... „ 389
kewensis, *Clarke* ... „ 388
lanceolata, Wight ... „ 387
Lawiana, Wight ... „ 387
longifolia, Wight ... „ 386
nilagirica, *Hassk.* ... „ 389
nobilis, Hassk. ... „ 385
nodiflora, Clarke ... „ 385
papilionacea, *Schultes f.* „ 384
pilosa, *Schultes f.* ... „ 387
pilosa, Wight ... „ 386
racemosa, Clarke ... „ 385
rosea, Wight ... „ 388
sarmentosa, Wight ... „ 386
? *sericea*, Hassk. ... „ 386
Stocksii, Hassk. ... „ 386
Thomsonii, Hassk. ... „ 386
Thwaitesii, Hassk. ... „ 388
tuberosa, *Schultes f.* ... „ 386
vaga, *Schultes f.* ... „ 387
vaginata, *Wight* ... „ 385
villosa, *Schultes f.* ... „ 387
vivipara, *Dalz.* ... „ 388
Wightii, *Clarke* ... „ 386
zeylanica, *Hassk.* ... „ 387
sp., Hk. f. & T. ... vi. 386, 387

Cyanotis Vol. Page
sp., Wall. ... vi. 385
Cyanotis, Miers ... v. 666
nepalensis, Miers ... „ 666
Cyanthillium, lapsu *Cynanthillium* ... iii. 235
pubescens, Bl. ... „ 235
villosum, Bl. ... „ 235
Cyathidium taraxicifolium, Lindl. ... iii. 369
Cyathocalyx, *Champ.* ... i. 53
? **Maingayi**, *Hk. f. & T.* ... „ 53
martabanicus, *Hk. f. & T.* „ 53
zeylanicus, *Champ.* ... „ 53
Cyathocline, *Cass.* ... iii. 246
flava, Clarke ... „ 246
Lawii, Dalz. & Gibs. ... „ 246
Lawii, Wight ... „ 246
lutea, *Law* ... „ 246
lyrata, *Cass.* ... „ 246
stricta, DC. ... „ 246
Cyathopus, *Stapf* ... vii. 240, 421
sikkimensis, *Stapf* ... vii. 240
Cyathorhachis Wallichiana, Nees ... vii. 101
Cyathostemma, *Griff.* ... i. 57
viridiflorum, *Griff.* ... „ 57
Cyathula, *Lour.* ... iv. 722
capitata, *Moq.* ... „ 722
capitata, Thw. ... „ 723
ceylanica, *Hk. f.* ... „ 723
globulifera, Moq. ... „ 723
orbiculata, Moq. ... „ 724
prostrata, *Bl.* ... „ 723
repens, Moq. ... „ 723
Sequax, Moq. ... „ 722
tomentosa, *Moq.* ... „ 722
Cybbanthera connata, Ham. iv. 269
Cybele, Falc. ... vi. 129
alpina, Falc. ... „ 129
CYCADACEÆ ... v. 655
Cycas, *Linn.* ... v. 656
aurea, Versch. ... „ 657
Beddomei, *Dyer* ... „ 658
Boddami, Hort. ... „ 656
circinalis, *Linn.* ... „ 656
circinalis, Roxb. ... „ 657
dilatata, Griff. ... „ 657
glauca, Miq. ... „ 657
Jenkinsiana, Griff. ... „ 657
macrocarpa, Griff. ... „ 657
madagascariensis, Miq. ... „ 656
pectinata, *Griff.* ... „ 657
Pluma, Bull ... „ 656
revoluta, Bedd. ... „ 658
revoluta, Thunb. ... „ 656
Rumphii, *Miq.* ... „ 657
Scratchleyana, F. Muell. „ 657

Cycas ... Vol. Page
siamensis, *Miq.* ... ... v. 657
sphærica, Roxb. ... ... „ 656
squamosa, Lodd. ... ... „ 656
squarrosa, Steud. ... ... „ 656
Thouarsii, Br. ... ... „ 656
Wallichii, Miq. ... ... „ 657
sp., Griff. ... ... „ 657
Cyclea, *Arn.* ... ... i. 104
Arnottii, Miers ... ... „ 104
barbata, Miers ... ... „ 104
Burmanni, *Miers* ... ... „ 104
Burmanni, Arn. ... ... „ 104
debiliflora, Miers ... ... „ 104
laxiflora, Miers ... ... „ 104
peltata, *Hk. f. & T.* ... ... „ 104
populifolia, Hk. f. & T. ... „ 105
versicolor, Miers ... ... „ 104
Cyclocampe waigiouensis, Steud. ... ... vi. 673
Cyclocarpa waigiouensis, Miq. vi. 673
Cyclocodon, Griff. ... ... iii. 436
adnatum, Griff. ... ... „ 436
distans, Griff. ... ... „ 436
lancifolium, Kurz ... ... „ 436
parviflorum, Hk. f. & T. ... „ 436
truncatum, Hk. f. & T. ... „ 436
Cyclodiscus latifolius, Klotz. v. 73
tomentosus, Klotz. ... ... „ 73
CYCLOLOBEÆ ... ... v. 1
Cyclostegia strobilifera, Benth. iv. 645
Cyclostemon, *Bl.* ... ... v. 339
assamicus, *Hk. f.* ... ... „ 342
calocarpus, *Hk. f.* ... ... „ 343
confertiflorus, *Hk. f.* ... „ 341
Curtisii, *Hk. f.* ... ... „ 343
cuspidatus, Bl. ... ... „ 486
eglandulosus, *Kurz* ... „ 341
ellipticus, *Hk. f.* ... ... „ 342
Griffithii, *Hk. f.* ... ... „ 340
Helferi, *Hk. f.* ... ... „ 343
indicus, *Muell.* ... ... „ 340
lancifolius, *Hk. f.* ... ... „ 340
leiocarpus, *Kurz* ... ... „ 343
longifolius, *Bl.* ... ... „ 341
macrophyllus, *Bl.* ... ... „ 340
macrophyllus, Bedd. ... „ 341
? *macrophyllus*, Kurz ... „ 341
malabaricus, *Bedd.* ... ... „ 341
nervosus, *Hk. f.* ... ... „ 342
subsessilis, *Kurz* ... ... „ 342
zeylanicus, Baill. ... ... „ 341
Cydonia, *Tourn.* ... ... ii. 368
indica, Spach ... ... „ 369
lusitanica, Mill. ... ... „ 369
Sumboshia, Ham. ... ... „ 369
vulgaris, *Pers.* ... ... „ 369
Cylicodaphne, Nees ... ... v. 164

Cylicodaphne Vol. Page
feruginea, Meissn. ... ... v. 160
? *floribunda*, Bl. ... ... „ 177
Gardneri, Meissn. ... ... „ 173
? *Hookeri*, Meissn. ... ... „ 164
infectoria, Bl. ... ... „ 117
myristicæfolia, Meissn. ... „ 172
nitida, Meissn. ... ... „ 174
oblonga, Meissn. ... ... „ 168
obtusifolia, Nees ... ... „ 171
rigida, Meissn. ... ... „ 176
sebifera, Bl. ... ... „ 180
Thwaitesii, Meissn. ... v. 173, 174
Walkeri, Meissn. ... .. v. 174
Wightiana, Nees ... ... „ 177
zeylanica, Meissn. ... ... „ 176
Cylindrochilus pulchellus, Thw. vi. 39
Cylindrolobus, Bl. ... ... v. 786
Cylindropus junciformis, Nees vi. 692
Cylista, *Ait.* ... ... ii. 219
albiflora, Sims ... ... „ 223
reticulata, Heyne ... ... „ 220
scariosa, *Ait.* .. .. „ 219
suaveolens, Grah. ... ... „ 220
tomentosa, Roxb. ... ... „ 223
Cymaria, *Benth.* ... ... iv. 704
dichotoma, *Benth.* ... ... „ 705
elongata, *Benth.* ... ... „ 705
Cymbachne ciliaris, Retz. ... vii. 210
Cymbidium, *Swartz* ... ... vi. 8
? *affine*, Griff. ... ... „ 15
affine, Warn. ... ... „ 15
Alagnata, Ham. ... ... „ 52
alatum, Roxb. ... ... „ 19
aloifolium, *Sw.* ... ... „ 10
aloifolium, Heyne ... ... „ 78
aloifolium, Lodd. ... ... „ 10
aloifolium, Wall. ... ... „ 11
aloifolium, Wight ... ... „ 11
aphyllum, Sw. ... ... v. 739
assamicum, Linden .. vi. 14
bambusifolium, Roxb. ... v. 857
bicolor, *Lindl.* ... ... vi. 11
? *bituberculatum*, Hk. ... v. 696
carnosum, Griff. ... ... vi. 14
chloranthum, Lindl. ... ... „ 14
cochleare, Lindl. ... ... „ 15
crassifolium, Wall. ... ... „ 10
cyperifolium, *Wall.* ... ... „ 13
Dayanum, Rchb. f. ... ... „ 12
densiflorum, Griff. ... ... „ 14
Devonianum, *Paxt.* ... ... „ 10
eburneum, *Lindl.* ... ... „ 11
elegans, Heyne ... ... „ 44
elegans, Lindl. ... ... „ 14
ensifolium, *Sw.* ... ... „ 13
? *erectum*, Wight ... ... „ 11
erythræum, Lindl. ... ... „ 13

Cymbidium Vol. Page
  Finlaysonianum, *Lindl.* ... vi. 11
  Gibsoni, Paxt. ... ... „ 9
  giganteum, *Wall.* ... ... „ 12
  giganteum, Lindl. ... vi. 12, 14
  grandiflorum, *Griff.* ... vi. 12
  hæmatodes, Lindl. ... ... „ 13
  Hookerianum, Rchb. f. ... „ 12
  humile, Sm. ... ... v. 841
  imbricatum, Roxb. ... ... „ 846
  inconspicuum, Wall. ... vi. 56
  iridifolium, Roxb. ... ... v. 676
  iridioides, D. Don ... ... vi. 14
  ixioides, D. Don ... ... v. 815
  javanicum, Bl. ... ... vi. 9
  lancifolium, *Hook.* ... ... „ 9
  lineare, Heyne ... ... „ 47
  longifolium, *D. Don*... ... „ 13
  Lowianum, Rchb. f.... ... „ 13
  macrorhizon, *Lindl.* ... „ 9
  Mannii, Rchb. f. ... ... „ 10
  Mastersii, Griff. ... ... „ 15
  micromeson, Lindl. ... ... „ 15
  minimifolium, Thw. ... „ 37
  nitidum, Roxb.... ... ... v. 837
  ovatum, Willd. ... ... „ 719
  Parishii, Rchb. f. ... ... vi. 12
  pendulum, Bot. Reg. ... „ 11
  pendulum, Sw. ... ... „ 10
  præcox, Sm. ... ... „ 194
  præmorsum, Sw. ... ... „ 63
  pubescens, *Lindl.* ... ... „ 11
  Satyrium, Ham. ... ... „ 58
  scriptum, Sw. ... ... „ 18
  sikkimense, *Hk. f.* ... ... „ 9
  sinense, Lindl. ... ... „ 14
  speciosissimum, D. Don ... v. 829
  strictum, D. Don ... ... vi. 193
  syringodorum, Griff.... ... „ 12
  tenuifolium, Lindl. ... ... „ 24
  tenuifolium, Wight ... ... „ 22
  tenuifolium, Willd. ... ... „ 26
  tessellatum, Sw.... ... ... „ 52
  tesselloides, Roxb. ... ... „ 52
  tigrinum, *Par.* ... ... „ 9
  tricolor, Miq. ... ... „ 11
  triste, Roxb. ... ... „ 22
  triste, Wight ... ... „ 24
  triste, Willd. ... ... vi. 23, 25
  variciferum, Rchb. f. ... vi. 14
  viridiflorum, Griff. ... ... „ 13
  Wallichii, Lindl. ... ... „ 11
  sp., Griff. ... ... vi. 6, 12, 14, 192
Cymbopogon, Hack. ... ... vii. 202
  arabicus, Nees ... ... „ 203
  Arriani, Aitch. ... ... „ 203
  arundinaceus, Schult. ... „ 217
  circinnatus, Hochst. ... „ 203
Cymbopogon Vol. Page
  glandulosus, Spreng. ... vii. 218
  Iwarancusa, Schult. ... „ 203
  laniger, Duthie ... ... „ 203
Cyminosma Ankenda, Gærtn. i. 498
  pedunculata, DC. ... ... „ 498
Cymodocea, *Kœn.* ... ... vi. 570
  æquorea, Kunth ... ... „ 570
  australis, *Trim.* ... ... „ 570
  ciliata, *Ehrenb.* ... ... „ 570
  isœtifolia, *Asch.* ... ... „ 570
  serrulata, *Asch. & Magn.*... „ 570
CYNANCHEÆ ... ... iv. 2, 16
Cynanchum, *Linn.* .. ... iv. 21
  acuminatum, Ham. ... ... „ 30
  acuminatum, Thunb. ... „ 20
  acutum, *Linn.* ... ... „ 24
  alatum, *W. & A.* ... ... „ 23
  angustifolium, W. & A. ... „ 24
  Arnottianum, *Wight* ... „ 22
  asthmaticum, Ham. ... ... „ 63
  auriculatum, *Royle* ... ... „ 25
  auriculatum, Ham. ... ... „ 24
  bracteatum, Thunb. ... ... iv. 41, 45
  Callialata, *Ham.* ... ... „ 24
  cordifolium, Retz. ... ... „ 20
  corymbosum, *Wight* ... „ 24
  cuspidatum, Thunb.... ... „ 32
  Dalhousiæ, *Wight* ... ... „ 25
  deltoideum, *Hk. f.* ... ... „ 24
  echinatum, Thunb. ... ... „ 20
  extensum, Ait. ... ... „ 20
  flavens, Thunb. ... ... „ 41
  flavum, Thunb. ... ... „ 45
  glaucum, *Wall.* ... ... „ 22
  gracillimum, Wall. ... ... „ 21
  Heydei, *Hk. f.* ... ... „ 25
  Heyneana, R. & S. ... ... „ 26
  humile, Falc. ... ... „ 26
  inconspicuum, Griff. ... „ 23
  indicum, Herb. Burm. ... „ 45
  inodorum, Lour. ... ... „ 33
  Ipecacuanha, Willd. ... „ 45
  Jacquemontianum, *Dcne.* „ 26
  Kenouriense, Wight ... ... „ 22
  longifolium, Mart. ... ... „ 25
  micranthum, Thunb. ... „ 42
  nanum, Ham. ... ... „ 19
  ovalifolium, *Wight* ... ... „ 22
  ? *ovatum*, Thunb. ... ... „ 63
  pauciflorum, *Br.* ... ... „ 23
  pedunculatum, Thunb. ... „ 26
  pyrotechnicum, Forsk. ... „ 64
  reticulatum, Ham. ... ... „ 36
  reticulatum, Retz. ... ... „ 63
  Roylei, *Wight* ... ... „ 25
  tingens, Ham. ... ... „ 34
  tomentosum, Lamk. ... „ 26

Cynanchum Vol. Page
Vincetoxicum, *Pers.* ... iv. 22
viridiflorum, Sims ... ... „ 45
vomitorium. Lamk. ... ... „ 45
Wallichii, *Wight* ... ... „ 23
Wilfordi, Maxim. ... ... „ 25
Cynanthillium, vide *Cyanthillium*, Bl. ... ... iii. 235
CYNAROIDEÆ ... ... iii. 225, 358
Cynoctonum alatum, Dcne. iv. 23
angustifolium, Dcne. ... „ 24
Blumei, Dcne. ... ... „ 23
Callialata, Dcne. ... ... „ 24
corymbosum, Dcne. ... „ 24
formosanum, Maxim. ... „ 23
ovalifolium, Dcne. ... ... „ 23
pauciflorum, Dcne. ... ... „ 23
Wallichii, Dcne. ... ... „ 23
Cynodon, *Pers.* ... ... vii. 288
dactylon, *Pers.* ... ... „ 288
elongatus, Trin. ... ... „ 290
erectus, Presl ... . „ 288
filiformis, Voigt ... ... „ 288
gracilis, Nees ... ... „ 297
linearis, Willd. ... ... „ 288
maritimus, H. B. K. ... „ 288
Neesii, Thw. ... ... „ 298
occidentalis, Willd. ... ... „ 288
polystachyus, Br. ... ... „ 298
portoricensis, Willd. ... „ 288
radiatus, Roth ... ... „ 288
repens, Dulac ... ... „ 288
sarmentosus, S. F. Gray ... „ 288
stellatus, Willd. ... ... „ 288
ternatus, A. Rich. ... ... „ 17
virgatus, Nees ... vii. 288, 298, 299
Cynoglossum, *Linn.* ... ... iv. 155
anchusoides, Lindl. ... ... „ 161
calycinum, Wall. ... ... „ 157
canescens, Wall. ... ... „ 157
canescens, Willd. ... ... „ 156
cœlestinum, Lindl. ... ... „ 160
denticulatum, *A. DC.* ... „ 157
diffusum, Roxb. ... ... „ 167
Edgeworthii, *A. DC.* ... „ 158
Emodi, Schouw ... ... „ 161
furcatum, *Wall.* ... ... „ 155
glochidiatum, *Wall.* ... „ 156
glochidiatum, Benth. ... „ 157
glochidiatum, Dalz. & Gibs. „ 157
grandiflorum, Benth. ... „ 159
Heynei, G. Don ... ... „ 156
hirsutum, Jacq. ... ... „ 156
lanceolatum, *Forsk.* ... „ 156
lanceolatum, Heyne ... „ 156
laxum, G. Don ... ... „ 161
longiflorum, Benth. ... „ 159
macrostylum, Bunge ... „ 161

Cynoglossum Vol. Page
marifolium, Roxb. ... ... iv. 152
? *membranaceum*, A. DC. „ 157
micranthum, *Desf.* ... ... „ 156
micranthum, Dalz. & Gibs. „ 156
microcarpum, Kerner ... „ 157
microglochin, *Benth.* ... „ 158
nervosum, *Benth.* ... ... „ 158
ovatum, Moon ... ... „ 155
petiolatum, *A. DC.* ... ... „ 158
prostratum, Ham. ... ... „ 167
racemosum, Roxb. ... ... „ 156
? Ritchei, *Clarke* ... ... „ 157
Roylei, Wall. ... ... „ 161
stellulatum, Wall. ... ... „ 156
uncinatum, Benth. ... .. „ 161
vesiculosum, Wall. ... iv. 156, 157
Wallichii, *G. Don* ... ... iv. 157
zeylanicum, Thunb. ... „ 157
zeylanicum, Wight ... ... „ 151
sp., Hk. f. & T. ... iv. 157, 161
Cynometra, *Linn.* ... ... ii. 267
bijuga, Spanog. ... ... „ 267
cauliflora, *Linn.* ... ... „ 268
cauliflora, Wall. ... ... „ 267
inæquifolia, *A. Gray* ... „ 267
mimosoides, Wall. ... ... „ 267
polyandra, *Roxb.* ... ... „ 268
ramiflora, *Linn.* ... ... „ 267
travancorica, *Bedd.* ... „ 267
Cynosurus, *Linn.* ... ... vii. 307
ægyptus, Linn. ... ... „ 296
Ara, Ham. ... ... „ 294
aureus, Linn. ... ... „ 307
Cavara, Ham. ... ... „ 296
ciliaris, Rottl. ... ... „ 296
coracanus, Linn. ... ... „ 294
coromandelianus, Rottl. ... „ 297
cristatus, *Linn.* ... ... „ 307
distachyus, Rottl. ... ... „ 296
durus, Forsk. ... ... „ 325
durus, Linn. ... ... „ 335
filiformis, Vahl ... ... „ 299
indicus, Linn. ... ... „ 294
Macara, Ham. ... ... „ 296
monostachyus, Vahl ... ... „ 293
paniceus, Linn. ... ... „ 245
paniculatus, Roxb. ... ... „ 297
? *pectinatus*, Lamk. ... ... „ 294
penicillatus, Vahl ... ... „ 293
retroflexus, Vahl ... ... „ 297
Cyperacea, Griff. ... ... vi. 590
Wall. ... ... „ 681
CYPERACEÆ ... ... vi. 585
CYPEREÆ .. .. vi. 586
Cyperorchis, *Bl.* ... ... vi. 14, 178
cochleare, *Benth.* ... ... vi. 15
elegans, *Bl.* ... ... „ 14

Cyperorchis Vol. Page
Mastersii, *Benth.* ... ... vi. 15
? *Wallichii*, Bl. ... ... „ 13
Cyperus, *Linn.* ... ... vi. 597
acerosus, Roxb. ... ... „ 617
acuminatus, Roxb. ... ... „ 596
albidus, Heyne ... ... „ 615
alopecuroides, Boeck. ... „ 617
alopecuroides, Heyne ... „ 595
alopecuroides, Rottb. ... „ 595
alopecuroides, Roxb. ... „ 617
amabilis, *Vahl* ... ... „ 598
amoyensis, Hance ... ... „ 610
Andersonianus, Boeck. ... „ 621
angulatus, Nees ... ... „ 593
angulatus, Strach. ... ... „ 590
angustifolius, Ham. ... „ 599
aphyllus, Boeck. ... ... „ 590
arenarius, *Retz.* ... ... „ 602
arenarius, Hance ... ... „ 615
arenarius, Heyne ... ... „ 601
arenarius, Prain ... ... „ 603
arenarius, Wight ... ... „ 606
aristatus, *Rottb.* ... ... „ 606
articulatus, *Linn.* ... ... „ 611
ater, Dalz. & Gibs. ... „ 592
Atkinsoni, *Clarke* ... ... „ 603
atratus, Steud. ... ... „ 590
atro-ferrugineus, Steud. ... „ 592
aureus, H. B. K. ... ... „ 598
auricomus, Benth. ... ... „ 618
auricomus, Sieb. ... ... „ 618
Babakan, Steud. ... ... „ 610
Babakensis, *Steud.* ... „ 610
Baccha, Kunth ... ... „ 593
Bacha, Ham. ... ... „ 610
bengalensis, Clarke ... ... „ 610
bengalensis, C. Spreng. ... „ 612
bicarinatus, Heyne ... ... „ 592
biglumis, Clarke ... ... „ 622
bromoides, Willd. ... ... „ 593
brunnescens, *Boeck.* ... „ 619
bulboso-stoloniferus, Steud. „ 615
bulbosus, *Vahl* ... ... „ 611
canescens, Heyne ... ... „ 598
canescens, Vahl ... ... „ 623
capillaris, Hochst. ... ... „ 589
capillaris, Kœn. ... ... „ 591
caricinus, D. Don ... ... „ 718
carnosus, Heyne ... ... „ 610
castaneus, *Willd.* ... ... „ 598
castaneus, Hance ... ... „ 599
Cephalotes, *Vahl* ... ... „ 597
chilensis, Boeck. ... ... „ 619
compactus, Retz. ... ... „ 624
complanatus, Wight ... „ 608
complanatus, Willd. ... .. „ 616
compositus, Br. ... ... „ 595

Cyperus Vol. Page
compressus, *Linn.* ... ... vi. 605
concolor, Steud. ... ... „ 590
congestus, Heyne ... ... „ 595
conglomeratus, *Rottb.* ... „ 602
conglomeratus, Thw. ... „ 603
conjunctus, Steud. ... ... „ 615
Coracana, Heyne ... ... vii. 295
coromandelinus, Boeck. ... vi. 589
coromandelinus, Spreng. ... „ 601
coronarius, *Kunth* ... ... „ 619
corymbosus, *Rottb.* ... ... „ 612
corymbosus, Kœn. ... ... „ 631
corymbosus, Roxb. ... ... „ 592
corymbosus, Wall. ... ... „ 612
cruentus, Boeck. ... ... „ 620
cruentus, Roxb. ... ... „ 590
curvulus, Boeck. ... ... „ 603
cuspidatus, *H. B. K.* ... „ 598
cylindricus, Boeck. ... ... „ 619
cylindrostachys, Boeck. ... „ 622
dehiscens, Nees ... ... „ 613
densus, Br. ... ... „ 603
denudatus, Heyne ... ... „ 614
diaphanira, Steud. ... ... „ 606
diaphanus, Schrad. ... ... „ 590
difformis, *Linn.* ... ... „ 599
diffusus, *Vahl* ... ... vi. 603, 604
diffusus, Kunth ... ... vi. 604
diffusus, Roxb. ... ... „ 662
digitatus, *Roxb.* ... ... „ 618
digitatus, Nees ... ... „ 617
dilutus, Vahl ... ... „ 624
diluvialis, Schult. ... ... „ 595
diphyllos, Benth. ... ... „ 611
diphyllus, Retz. ... ... „ 612
distachyos, Allioni ... ... „ 597
distans, *Linn. f.* ... ... „ 607
divaricatus, Ham. ... ... „ 592
dives, Delile ... ... „ 617
Donianus, Dietr. ... ... „ 609
dubius, Rottl. ... ... vi. 597, 620
effusus, *Rottb.* ... ... vi. 603
elatus, *Linn.* ... ... „ 618
elatus, Heyne ... ... „ 617
elatus, Rottb. ... ... „ 607
elatus, Roxb. ... ... „ 619
elegans, Kunth ... ... „ 603
elegans, Linn. ... ... „ 604
eleusinoides, *Kunth* ... „ 608
eminens, Klein ... ... „ 619
enodis, Boeck. ... ... „ 612
Eragrostis, Rottl. ... ... „ 592
Eragrostis, Vahl ... ... „ 590
esculentus, *Linn.* ... ... „ 616
eumorphus, Steud. ... ... „ 600
exaltatus, *Retz.* ... vi. 596, 617
exaltatus, Strach. ... ... vi. 608

Cyperus Vol. Page
extensus, Heyne ... ... vi. 617
fastigiatus, Heyne ... ... „ 608
fastigiatus, Rottl. ... ... „ 619
Fenzlianus, *Steud.* ... ... „ 615
ferax, Rich. ... ... „ 624
ferox, Vahl ... ... „ 624
ferrugineus, Poir. ... .. „ 593
Fieldingii, Steud. ... ... „ 601
filiformis, Heyne ... vi. 589, 592
fimbriatus, Nees ... ... vi. 609
flavescens, Linn. ... ... „ 589
flavescens, Thw. ... ... „ 591
flavicomus, Torr. ... ... „ 594
flavidus, *Retz.* ... ... „ 600
flavidus, Dcne. ... ... „ 591
flavidus, Heyne ... ... „ 594
fluitans, Ham. ... ... „ 598
fuscus, *Linn.* ... ... „ 599
gangeticus, Roxb. ... ... „ 608
geminatus, Heyne ... ... „ 592
geminatus, Kœn. ... ... „ 611
glaber, *Linn.* ... ... „ 606
globosus, Allioni ... ... „ 591
glomeratus, *Linn.* ... ... „ 607
glomeratus, Klein ... ... „ 625
Goeringii, Steud. ... ... „ 599
gracilis, Heyne ... ... „ 600
graminicolor, Steud. ... „ 607
graminifolius, Poir. ... „ 600
Griffithianus, Boeck. ... „ 609
Griffithii, Steud. ... ... „ 605
grossarius, Heyne ... ... „ 590
Gula-Methi, R. & S. ... „ 612
gymnos, R. & S. ... ... „ 611
Haspan, *Linn.* ... ... „ 600
Haspan, Benth. ... ... „ 600
Haspan, Rottb. ... ... „ 601
Haspan, Wight ... ... „ 601
hebes, Steud. ... ... „ 609
Helferi, *Boeck.* ... ... „ 604
hexangularis, Wight ... „ 601
hexastachyus, Nees ... ... „ 616
hexastachyus, Rottb. ... „ 615
Heyneanus, Boeck. ... ... „ 609
Heynei, Boeck. ... ... „ 610
Hochstetteri, Nees ... ... „ 594
honestus, Kunth ... ... „ 609
Hookerianus, Arn. ... ... „ 592
Hookerianus, Thw. ... ... „ 597
hyalinus, Heyne ... ... „ 623
hyalinus, Vahl ... ... „ 591
incurvatus, Roxb. ... ... „ 608
indicus, *Boeck.* ... ... „ 619
indicus, Pers. ... ... „ 649
infra-apicalis, Nees ... „ 608
intermedius, Steud. ... „ 590
inundatus, Nees ... ... „ 593

Cyperus Vol. Page
inundatus, Roxb. ... vi. 595, 607
involucratus, Poir. ... ... vi. 617
Iria, *Linn.* ... ... „ 606
Iria, Thw. ... ... „ 607
ischnos, Schl. ... ... „ 623
Jacquini, Schrad. ... ... „ 607
japonicus, Miq. ... ... „ 594
jeminicus, Heyne vi. 590, 615, 616
jeminicus, Retz. ... ... vi. 611
jeminicus, Rottb. ... ... „ 602
juncifolius, Klein ... ... „ 615
junciformis, Desf. ... ... „ 597
Junghuhnii, Miq. ... ... „ 592
Kamphœveneri, *Boeck.* ... „ 594
Kleinianus, Hochst. ... „ 625
Kœnigii, Vahl ... ... „ 612
Kurrii, Steud. ... ... „ 607
Kurzii, *Clarke* ... ... „ 604
kyllingiæoides, Vahl... ... „ 620
lævigatus, Linn. ... ... „ 596
lagorensis, Steud. ... ... „ 604
Lamarckianus, Schult. ... „ 591
lamprocarpus, Boeck. ... „ 615
lateralis, Forsk. ... ... „ 596
latespicatus, Boeck. ... ... „ 590
leptostachyus, Griff. ... ... „ 615
leucocephalus, *Retz.* ... „ 602
leucocephalus, Wight vi. 597, 603
littoralis, Br. ... ... vi. 615
lividus, Heyne ... ... „ 592
longifolius, Dcne. ... ... „ 603
longus, *Linn.* ... ... „ 614
longus, Baker ... ... „ 616
longus, Heyne ... ... „ 594
lucidulus, Clarke ... ... „ 614
lucidulus, Klein ... ... „ 616
lucidus, Heyne... ... ... „ 592
macer, *Clarke* ... ... „ 613
macropus, Miq. ... ... „ 605
macrostachyus, Vahl ... „ 594
maderaspatanus, Willd. ... „ 623
malaccensis, *Lam.* ... ... „ 608
marginellus, Nees ... ... „ 609
maximus, Heyne ... ... „ 617
maximus, Roxb. ... ... „ 619
membranaceus, Vahl ... „ 591
Meyenii, Nees ... ... „ 605
microcarpus, Boeck. ... „ 601
microiria, Steud. ... ... „ 606
microlepis, Baker ... ... „ 606
mitis, Steud. ... ... „ 616
mœstus, Kunth ... ... „ 603
monocephalus, Roxb. vi. 596, 597
monophyllus, Vahl ... ... vi. 612
monostachyus, Linn. ... „ 649
Monti, Linn. f. ... . „ 594
mucronatus, Heyne ... ... „ 596

Cyperus Vol. Page
mucronatus, Moritz ... vi. 591
mucronatus, Rottb. ... ... ,, 596
multispicatus, *Boeck.* ... ,, 604
musarius, Ham. ... ... ,, 662
mysurensis, Heyne ... ... ,, 608
natans, Ham. ... ... ,, 597
Neesii, Kunth ... ... ,, 618
Neesii, Thw. ... ... ,, 618
nigro-viridis, Thw. ... ... ,, 603
nilagiricus, Hochst. ... ,, 592
nitens, Retz. ... ... ,, 601
nitens, Rottb. ... ... ,, 601
nitens, Rottl. ... ... ,, 601
nitens, Vahl ... ... ,, 591
nitens, Wall. ... ... ,, 601
niveus, *Retz.* ... ... ,, 601
niveus, Heyne ... ... ,, 596
nudus, Roxb. ... ... vi. 611, 612
nutans, *Vahl* ... ... vi. 607
nutans, Presl ... ... ,, 607
Oatesii, *Clarke*... ... ... ,, 618
obliquus, Nees ... ... ,, 610
obscurus, Nees ... ... ,, 617
obstinatus, Steud. ... ... ,, 591
ochreoides, Steud. ... ... ,, 615
odoratus, Burm. ... ... ,, 617
odoratus, Forst. ... ... ,, 624
odoratus, Linn. ... vi. 592, 608
oleraceus, Roxb. ... ... vi. 611
ornatus, Br. ... ... ,, 610
oryzeticola, Steud. ... ... ,, 617
ovularis, Boeck. ... ... ,, 622
pachyrrhizus, *Nees* ... ... ,, 603
pallescens, Boiss. ... ... ,, 615
pallidus, Heyne ... ... ,, 598
Pangorei, Ham. ... ... ,, 609
Pangorei, Heyne ... ... ,, 613
Pangorei, Retz. ... ... ,, 616
Pangorei, Rottb. ... ... ,, 612
Pangorei, Roxb. ... ... ,, 608
Pangorei, Wight ... ... ,, 613
paniceus, Boeck. ... ... ,, 621
paniculatus, D. Don ... ,, 609
paniculatus, Rottb. ... ... ,, 592
Panimotha, Ham. ... ... ,, 609
parviflorus, Heyne ... ... ,, 617
parviflorus, Nees ... ... ,, 607
patulus, Kitaib. ... ... ,, 606
pauciflorus, Steud. ... ... ,, 609
pauper, Clarke ... ... ,, 590
pectinatus, Roxb. ... ... ,, 601
pectiniformis, Nees ... vi. 605, 606
pectiniformis, *R. & S.* ... vi. 601
pennatus, Boeck. ... ... ,, 624
pennatus, Lam. ... ... ,, 623
pertenuis, Bojer ... ... ,, 616
pertenuis, Roxb. ... ... ,, 612

Cyperus Vol. Page
Pes-avium, Bertol. ... ... vi. 600
pictus, Wall. ... ... ,, 621
pilosus, *Vahl* ... ... vi. 595, 609
piptolepis, Steud. ... ... vi. 609
platyphyllus, *R. & S.* ... ,, 618
platystylis, *Br.* ... ... ,, 598
plenus, Heyne ... ... ,, 592
pleuranthus, Nees ... ... ,, 596
polystachyus, Br. ... ... ,, 592
polystachyus, Rottb. vi. 609, 616
polystachyus, Strach. ... vi. 592
procerulus, Nees ... ... ,, 616
procerus, *Rottb.* ... ... ,, 610
procerus, Roth ... ... ,, 609
procerus, Roxb. vi. 593, 608, 616
proteinolepis, Steud. ... vi. 603
Pseudo-bromoides, Boeck. ,, 590
pubescens, Steud. ... ... ,, 653
pubisquama, *Steud.* ... ,, 604
pulchellus, Br. ... ... ,, 602
pulcher, D. Don ... ... ,, 619
pulcherrimus, *Willd.* ... ,, 600
pulvinatus, Nees & Mey. ,, 591
pumilus, Heyne ... ... ,, 616
pumilus, Linn. ... ... ,, 591
pumilus, Nees ... ... ,, 591
pumilus, Rottb. ... ... ,, 590
punctatus, Roxb. ... ... ,, 591
puncticulatus, Aitch. ... ,, 594
puncticulatus, Steud. ... ,, 595
puncticulatus, Vahl ... ... ,, 593
pungens, Boeck. ... ... ,, 602
pusillus, Vahl ... ... ,, 619
pusillus, Wight ... vi. 598, 623
pygmæus, Retz. ... ... vi. 619
pygmæus, Rottb. ... ... ,, 596
quinqueflorus, Hochst. ... ,, 610
quinqueflorus, Steud. ... ,, 618
racemosus, Heyne ... vi. 603, 617
racemosus, Retz. ... ... vi. 618
radians, *Nees & Mey.* ... ,, 605
radiatus, *Vahl* ... ... ,, 617
radicans, Kunth ... ... ,, 605
Rehmanni, Boiss. ... ... ,, 590
Retzii, Nees ... ... ,, 616
rigidulus, Vahl ... ... ,, 619
Roestelii, Kunth ... ... ,, 616
rotundus, *Linn.* ... ... ,, 614
rotundus, Benth. ... ... ,, 616
rotundus, Boeck. ... ... ,, 615
rotundus, Kunth ... vi. 611, 615
rotundus, Miq. ... ... vi. 613
rotundus, Thw. ... vi. 612, 616
Roxburghianus, Presl ... vi. 596
Roxburghii, Nees ... ... ,, 619
Roylei, Arn. ... ... ,, 617
rubicundus, Kunth ... ... ,, 601

Cyperus Vol. Page
rubicundus, Vahl ... ... vi. 601
sanguinolentus, Vahl ... „ 590
scariosus, *Br.* ... ... „ 612
scoparius, Dcne. ... ... „ 608
semidives, Steud. ... ... „ 595
seminudus, Moritz ... ... „ 606
seminudus, Roxb. ... ... „ 612
semiteres, Heyne ... ... „ 592
serotinus, Rottb. ... ... „ 594
setaceus, Retz. ... ... „ 629
setifolius, D. Don ... ... „ 619
silletensis, *Nees* ... ... „ 600
silletensis, Thw. ... ... „ 600
sinensis, Deb. ... ... „ 605
solutus, Steud. ... ... „ 599
songaricus, Karel. ... ... „ 606
sorostachys, Boeck. ... ... „ 602
spadiceus, Heyne ... ... „ 610
spaniophyllus, Steud. ... „ 609
speciosus, Heyne ... ... „ 595
spicatus, Heyne ... ... „ 617
spinulosus, Roxb. ... ... „ 624
spongioso-vaginatus, *Boeck.* ... ... „ 619
squarrosus, Linn. ... vi. 606, 623
squarrosus, Roxb. ... ... vi. 596
squarrosus, Trim. ... ... „ 598
stenostachyus, *Benth.* ... „ 614
Steudelianus, Boeck. ... „ 622
stoloniferus, *Retz.* ... ... „ 615
stoloniferus, Nees ... ... „ 611
stramineus, Nees ... ... „ 589
strictus, Heyne... ... ... „ 601
strictus, Lam. ... ... „ 592
strictus, Rottl. ... ... „ 593
strictus, Wight ... ... „ 591
strigosus, Wight ... ... „ 592
subulatus, Steud. ... ... „ 609
subcapitatus, *Clarke* ... „ 616
subulatus, Heyne ... ... „ 613
sulcinux, Clarke ... ... „ 593
tegetiformis, *Roxb.* ... „ 612
tegetiformis, Benth. ... „ 609
tegetiformis, W. Wats. ... „ 613
tegetum, *Roxb.* ... ... „ 613
tegetum, Wight ... ... „ 594
tener, Vahl ... ... „ 619
Teneriffæ, *Poir.* ... ... „ 601
Tenorii, Presl ... ... „ 616
tenuiculmis, Boeck. ... „ 613
tenuiflorus, Balf. f. ... „ 615
tenuiflorus, Roxb. ... ... „ 616
tenuiflorus, Royle ... ... „ 615
tenuispica, Steud. ... ... „ 601
teretifructus, Steud. ... „ 592
Thomsoni, *Boeck.* ... ... „ 608
tortuosus, Kœn. ... ... „ 592

Cyperus Vol. Page
tortuosus, Roxb. ... .. vi. 591
triflorus, Linn. ... ... „ 649
trisculus, D. Don ... ... „ 619
truncatus, Franch. ... ... „ 609
tuberiferus, Schrad. ... „ 618
tuberosus, *Rottb.* ... ... „ 616
tuberosus, Bojer ... ... „ 615
turgidulus, *Clarke* ... ... „ 604
umbellatus, Benth. ... ... „ 621
umbellatus, Burm. ... ... „ 619
umbellatus, Miq. ... ... „ 622
umbellatus, Roxb. ... ... „ 617
umbellatus, Thw. ... vi. 621, 622
unioloides, Br. ... ... vi. 593
venustus, Br. ... ... „ 617
venustus, Moritz ... ... „ 609
venustus, Nees ... ... „ 618
versicolor, Nees ... ... „ 606
verticillatus, Roxb. ... ... „ 617
verticillatus, Herb. Wight „ 617
viridis, Roxb. ... ... „ 605
viscosus, Aiton ... ... „ 604
vulgaris, Sieb. ... ... „ 591
Wallichianus, Spreng. ... „ 619
Wallichii, Nees... ... ... „ 608
Wallichii, Wight ... ... „ 609
Wightii, Hance ... ... „ 613
Wightii, Nees ... ... „ 601
xanthopus, Steud. ... ... „ 608
Zollingeri, *Steud.* ... ... „ 613
sp., Coldstream ... ... „ 606
sp., Hk. f. & T. ... vi. 608, 612
sp., Wall. vi. 590, 591, 592, 593, 595, 599, 600, 601, 602, 603, 604, 605, 606, 607, 609, 611, 614, 615, 617, 618, 619, 623, 624, 640, 677, 680.
sp., Wight ... ... vi. 616, 670
Cyphostigma, *Benth.* ... ... vi. 250
exsertum, Scort. ... ... „ 251
pulchellum, *Benth.* ... ... „ 251
CYPRIPEDIEÆ ... ... v. 668, 675
vi. 169, 177
Cypripedium, *Linn.* ... ... vi. 169
barbatum, *Lindl.* ... ... „ 174
Boxalli, Rchb. f. ... ... „ 171
Calceolus, Linn. ... ... „ 170
concolor, *Batem.* ... ... „ 170
cordigerum, *D. Don* ... „ 170
Crossii, Morr. ... ... „ 174
Drurii, *Bedd.* ... ... „ 172
elegans, *Rchb. f.* ... ... „ 169
Fairieanum, *Lindl.* ... ... „ 173
Godefroyi, G. Lebœuf ... „ 171
hirsutissimum, *Lindl.* ... „ 171
insigne, *Wall.* ... ... „ 172
japonicum, Thunb. ... ... „ 169

Cypripedium Vol. Page
macranthon, *Sw.* ... ... vi. 170
niveum, *Rchb. f.* ... ... „ 171
orbum, Rchb. f. ... ... „ 174
pardinum, Rchb. f. ... ... „ 173
Parishii, *Rchb. f.* ... ... „ 174
purpuratum, Wight ... „ 174
Spicerianum, *Rchb. f.* .. „ 172
superbiens, *Rchb. f.* ... „ 173
Veitchianum, Lem. ... ... „ 173
ventricosum, Sw. ... ... „ 170
venustum, *Wall.* ... ... „ 173
villosum, *Lindl.* ... ... „ 171
Warnerianum, Rchb. f. ... „ 174
Cyrilla aquatica, Roxb. ... iv. 271
Cyrta agrestis, Ham. ... ... iii. 589
Cyrtandra, *Forst.* ... ... iv. 374
acuminata, Kurz ... ... „ 370
? *acuminata*, Wall. ... ... „ 370
bicolor, *Jack* ... ... „ 375
Blumeana, Clarke ... ... „ 375
decurrens, *De Vr.* ... ... „ 375
dispar, *DC.* ... ... „ 375
frutescens, Wall. ... ... „ 375
humilis, *Bl.* ... ... „ 375
? *lanuginosa*, Br. ... ... „ 372
pendula, Bl. ... ... „ 375
pilosa, *Bl.* ... ... „ 375
Cyrtandracea, Griff. ... iv. 340, 341, 342, 358, 362, 368, 373
Cyrtandromœa, *Zoll.* ... ... iv. 370
acuminata, *Benth.* ... ... „ 370
cymulosa, *Clarke* ... ... „ 371
decurrens, *Zoll.* ... ... „ 370
grandiflora, *Clarke* ... ... „ 371
Cyrtoceras (lapsu *Crytoceras*)
floribundum, Maund. ... iv. 52
reflexum, Benn. ... ... „ 52
Cyrtonema convolvulacea, Rich. ... ... ii. 627
divergens, Rich. ... ... „ 627
Cyrtopera bicarinata, Lindl. vi. 6
Brunoniana, Wight ... ... „ 6
candida, Lindl. ... ... „ 7
Culleni, Wight ... ... „ 7
flava, Lindl. ... ... „ 7
fusca, Wight ... ... „ 6
Gardneri, Thw. ... ... „ 6
laxiflora, Gardn. ... ... „ 6
Mannii, Rchb. f. ... ... „ 4
mysorensis, Lindl. ... ... „ 6
nuda, Rchb. f. ... ... „ 6
obtusa, Lindl. ... ... „ 3
plicata, Lindl. ... ... „ 6
rufa, Thw.... ... ... vi. 8, 196
sanguinea, Lindl. ... ... vi. 8
squalida, Rchb. f. ... ... „ 6
Cyrtophyllum fragrans, DC. iv. 85
Cyrtophyllum Vol. Page
? *lanceolatum*, DC. ... ... iv. 85
peregrinum, Reinw. .. „ 85
Cyrtosia altissima, Bl. ... vi. 89
javanica, Bl. ... ... „ 88
Lindleyana, Hk. f. & T. ... „ 88
Cyrtosperma, *Griff.* ... ... vi. 550
lasioides, *Griff.* ... ... „ 551
Cyrtostachys, *Bl.* ... ... vi. 414
Lakka, *Becc.* ... ... „ 414
Rendah, Bl. ... ... „ 414
Cyrtotropis carnea, Wall. ... ii. 188
Cyssopetalum javanum, Turcz. ii. 696
Cystacanthus, *T. Anders.* ... iv. 513
cymosus, *T. Anders.* ... „ 514
insignis, *Clarke* ... ... „ 514
paniculatus, *T. Anders.* ... „ 514
pulcherrimus, *Clarke* ... „ 514
Cystidianthus campanulatus, Hassk. ... ... iv. 62
Cystorchis, *Bl.* ... ... vi. 97, 179
fusca, Benth. ... ... vi. 112
javanica, *Bl.* ... ... „ 97
variegata, *Bl.* ... ... „ 97
Cytheris (lapsu *Citheris*)
cordifolia, Lindl. ... ... v. 818
Griffithii, Wight ... ... „ 852
CYTINACEÆ ... ... v. 71
Cytisus Cajan, Linn. ... ... ii. 217
flaccidus, Royle ... ... „ 63
lanuginosus, Royle ... ... „ 64
Pseudo-cajan, Jacq.... ... „ 217
roseus, Camb. ... ... „ 64
sericeus, Willd.... ... ... „ 110
Czernya arundinacea, Presl vii. 304

Dacrydium, *Soland.* ... ... v. 648
elatum, *Wall.* ... ... „ 648
Dactylicapnos thalictrifolia, Wall. ... ... i. 121
Dactylis, *Linn.* ... ... vii. 334
brevifolia, Kœn. vii. 295, 333, 334
caudata, Brot. ... ... vii. 309
cristata, Bieb. ... ... „ 308
cylindracea, Brot. ... ... „ 309
cynosuroides, Kœn. ... vii. 295, 297
geniculata, Roxb. ... ... vii. 295
glomerata, *Linn.* ... ... „ 335
interrupta, Rottl. ... ... „ 325
lagopodioides, Dalz. & Gibs. „ 334
lagopoides, Linn. ... ... „ 334
littoralis, Willd. ... ... „ 333
lobata, Bieb. ... ... „ 308
madraspatensis, Roxb. ... „ 297
massaviensis, Steud. ... „ 334
paleacea, Linn.... ... ... „ 308
paspaloides, Willd. ... ... „ 297
phleoides, Heyne ... ... „ 313

Dactylis Vol. Page
phleoides, Klein ... vii. 313
pungens, Hornem. ... „ 309
repens, Desf. ... „ 334
spicata, Brot. ... „ 309
spicata, Heyne ... „ 313
spicata, Willd. ... „ 306
Dactyloctenium, Willd. ... vii. 295
ægyptiacum, Willd. ... „ 296
distachyum, Bojer ... „ 296
Figarei, Notar. ... „ 296
glaucophyllum, Courb. ... „ 296
meridionale, Ham. ... „ 296
mucronatum, Willd. ... „ 296
prostratum, Willd. ... „ 296
radulans, Beauv. ... „ 296
scindicum, Boiss. ... „ 296
Dactylon officinale, Vill. ... vii. 289
sanguinale, Vill. ... „ 14
Dædalacanthus, *T. Anders.* iv. 417
Griffithii, *T. Anders.* ... „ 418
macrophyllus, *T. Anders.* „ 419
microstachyus, *T. Anders.* „ 420
montanus, *T. Anders.* ... „ 421
nervosus, *T. Anders.* ... „ 418
Parishii, *T. Anders.* ... „ 421
purpurascens, *T. Anders.* „ 420
roseus, *T. Anders.* ... „ 419
salaccensis, T. Anders. ... „ 421
scaber, T. Anders. ... „ 419
splendens, *T. Anders.* ... „ 418
strictus, *T. Anders.* ... „ 419
suffruticosus, *T. Anders.* „ 420
tetragonus, *T. Anders.* ... „ 420
tubiflorus, *T. Anders.* ... „ 417
Dæmia, *Br.* ... iv. 20
extensa, *Br.* ... „ 20
Dæmonorops, *Bl.* ... vi. 462
angustifolius, *Mart.* ... „ 464
calicarpus, *Mart.* ... „ 466
didymophyllus, *Becc.* ... „ 468
fasciculatus, Mart. ... „ 459
geniculatus, *Mart.* ... „ 470
grandis, *Mart.* ... „ 463
grandis, Kurz ... „ 463
Guruba, Mart. ... „ 449
hirsutus, Bl. ... „ 468
hygrophilus, *Mart.* ... „ 464
hypoleucus, Kurz ... „ 451
Hystrix, *Mart.* ... „ 468
intermedius, *Mart.* ... „ 464
Jenkinsianus, *Mart.* ... „ 462
Kuntsleri, *Becc.* ... „ 469
Kurzianus, *Hk. f.* ... „ 463
leptopus, *Mart.* ... „ 468
Lewisianus, *Mart.* ... „ 465
longipes, *Mart.* ... „ 471
macrophyllus, *Becc.* ... „ 470
Dæmonorops Vol. Page
Mannii, *Becc.* ... vi. 463
melanolepis, Mart. ... „ 452
micracanthus, *Becc.* ... „ 467
monticolus, *Mart.* ... „ 465
nutantiflorus, Mart. ... „ 462
oligophyllus, *Becc.* ... „ 470
petiolaris, *Mart.* ... „ 466
platyspathus, Mart. ... „ 450
propinquus, *Becc.* ... „ 467
Pseudosepal, *Becc.* ... „ 465
ramosissimus, Mart. ... „ 450
Rheedei, Mart. ... „ 452
Sabut, *Becc.* ... „ 469
Sepal, *Becc.* ... „ 465
strictus, Bl. ... „ 471
tabacinus, *Becc.* ... „ 466
vagans, *Becc.* ... „ 469
verticillaris, *Mart.* ... „ 470
Dalbergia, *Linn. f.* ... ii. 230
acaciæfolia, Dalz. ... „ 235
angustifolia, Hassk. ... „ 104
arborea, Heyne ... „ 235
arborea, Willd. ... „ 240
assamica, *Benth.* ... „ 235
Blumei, Hassk. ... „ 234
cana, *Grah.* ... „ 237
cassioides, Wall. ... „ 237
Championi, *Thw.* ... „ 231
confertiflora, *Benth.* ... „ 233
congesta, *Grah.* ... „ 232
Crowei, DC. ... „ 241
cultrata, *Grah.* ... „ 233
emarginata, Roxb. ... „ 231
ferruginea, Hohen. ... „ 234
ferruginea, Roxb. ... „ 237
flexuosa, Grah. ... „ 238
foliacea, *Wall.* ... „ 232
frondosa, Roxb. ... „ 235
frondosa, Wall. ... „ 234
Gardneriana, Benth. ... „ 232
glauca, Wall. ... „ 231
glomeriflora, *Kurz* ... „ 236
heterophylla, Willd. ... „ 241
hircina, *Benth.* ... „ 236
hircina, Wall. ... „ 235
horrida, Grah. ... „ 238
javanica, Miq. ... „ 231
Junghuhnii, *Benth.* ... „ 233
Krowee, Roxb. ... „ 241
lanceolaria, *Linn.* ... „ 235
lanceolaria, Moon ... „ 252
latifolia, *Roxb.* ... „ 231
livida, Wall. ... ii. 234, 237
marginata, Roxb. ... ii. 245
monosperma, *Dalz.* ... „ 237
Mooniana, Thw. ... „ 252
multijuga, Grah. ... „ 234

Dalbergia Vol. Page
ougeinensis, Roxb. ... ii. 161
ovata, *Grah* ... ,, 231
paniculata, *Roxb.* ... ,, 236
paniculata, Wall. ... ii. 233, 237
parviflora, Roxb. ... ii. 233
pendula, Tenore ... ,, 231
Pseudo-sissoo, Miq. ... ,, 232
purpurea, *Wall.* ... ,, 235
reniformis, *Roxb.* ... ,, 238
rimosa, *Roxb.* ... ,, 232
robusta, Roxb. ... ,, 241
robusta, Wall. ... ,, 235
rostrata, Grah. ... ,, 237
rubiginosa, *Roxb.* ... ,, 232
rufa, Grah. ... ,, 234
scandens, Roxb. ... ,, 240
sissoides, Grah. ... ,, 231
Sissoo, *Roxb.* ... ,, 231
spinosa, *Roxb.* ... ,, 238
stenocarpa, *Kurz* ... ,, 238
stipulacea, *Roxb.* ... ,, 237
stipulata, Wall. ... ii. 233, 238
Stocksii, *Benth.* ... ii. 234
sympathetica, *Nimmo* ... ,, 234
tamarindifolia, *Roxb.* ... ,, 234
tephrosioides, W. & A. ... ,, 105
Thomsoni, *Benth.* ... ,, 236
timoriensis, DC. ... ,, 240
tingens, Wall. ... ,, 237
torta, Grah. ... ,, 237
velutina, *Benth.* ... ,, 233
volubilis, *Roxb.* ... ,, 235
zeylanica, Roxb. ... ,, 235
DALBERGIEÆ ... ii. 60
Dalechampia, *Linn.* ... v. 467
bidentata, Thw. ... ,, 467
coromandeliana, Heyne ... ,, 467
indica, *Wight* ... ,, 467
Kurzii, *Hk. f.* ... ,, 468
scandens, Kurz ... ,, 468
ternata, Muell. ... ,, 467
velutina, *Wight* ... ,, 467
Dalhousiea, *Grah.* ... ii. 248
bracteata, *Grah.* ... ,, 248
Dalibarda calycina, DC. ... ii. 327
Dalrympelia pomifera, Roxb. i. 699
Dalzellia foliosa, Wight ... v. 63
Lawii, Wight ... ,, 63
pedunculosa, Wight... ... ,, 63
ramosissima, Wight... ... ,, 63
vivipara, Hassk. ... vi. 388
zeylanica, Wight ... v. 62
Damasonium indicum, Willd. v. 662
Dammara alba, Rumph ... v. 650
orientalis, Lamb. ... v. 650
Rumphii, Pres. ... ,, 650
Damnacanthus, *Gærtn.* ... iii. 158

Damnacanthus Vol. Page
indicus, *Gærtn. f.* ... iii. 158
Danthonia, *DC.* ... vii. 280, 421
cachemyriana, *J. & S.* ... vii. 281
Cumminsii, *Hk. f.* ... ,, 282
exilis, *Hk. f.* ... ,, 281
Griffithiana, C. Muell. ... ,, 282
himalaica, *Hk. f.* ... ,, 281
Kashmiriana, Duthie ... ,, 281
leptophylla, A. Rich. ... ,, 287
sp., Str. & Wint. ... ,, 282
Daphne, *Linn.* ... v. 193
acuminata, Boiss. & Hoh. ,, 193
Bholua, D. Don ... ,, 193
buxifolia, Vahl ... ,, 193
canescens, Wall. ... ,, 195
cannabina, *Wall.* ... v. 193, 862
? *cashemireana*, Meissn. ... v. 193
coriacea, Royle ... ,, 193
eriocephala, Wall. ... ,, 197
Gardneri, Wall. ... ,, 195
hypericifolia (lapsu *Septas*), Wall. ... ,, 196
inamœna, Gardn. ... ,, 195
involucrata, *Wall.* ... ,, 193
longifolia, Meissn. ... ,, 193
montana, Meissn. ... ,, 194
mucronata, Royle ... ,, 193
odora, D. Don ... ,, 193
oleoides, *Schreib.* ... ,, 193
oppositifolia, Ham. ... ,, 195
papyracea, Wall. ... ,, 193
papyrifera, Ham. ... ,, 193
papyrifera, Sieb. ... ,, 195
pendula, *Sm.* ... ,, 194
sericea, D. Don ... ,, 195
virgata, Wall. ... ,, 195
viridiflora, Wall. ... ,, 195
Wallichii, Meissn. ... ,, 193
sp., Griff. ... ,, 193
Daphnephyllopsis capitata, Kurz ... ii. 747
Daphnidium argenteum, *Kurz* ... v. 187
bifarium, Meissn. ... ,, 186
bifarium, Nees ... ,, 184
caudatum, Nees ... ,, 185
? *elongatum*, Nees ... ,, 165
lancifolium, *Thw.* ... ,, 187
melastomaceum, Nees ... ,, 185
oxyphyllum, Nees ... ,, 183
pulcherrimum, Nees ... ,, 185
venosum, Meissn. ... ,, 184
Daphniphyllum, *Bl.* ... v. 353
Benthami, Baill. ... ,, 354
glaucescens, *Bl.* ... ,, 353
himalayense, *Muell.* ... ,, 354
Kingii, *Hk. f.* ... ,, 354

Daphniphyllum Vol. Page
lancifolium, *Hk. f.* ... ... v. 354
laurinum, *Baill.* ... ... „ 353
majus, *Muell.* ... ... „ 353
Roxburghii, Baill. ... ... „ 354
Scortechinii, *Hk. f.* ... ... „ 354
Dargeria linifolia, Dcne. ... iv. 304
pinnatifida, Dcne. ... ... „ 303
Dasyaulus fulvus, Thw. ... iii. 545
microphyllus, Thw. ... ... „ 545
Moonii, Thw. ... ... „ 545
neriifolius, Thw. ... ... „ 545
Dasyloma benghalense, DC.... ii. 696
glaucum, DC. ... ... „ 696
japonicum, Miq. ... ... „ 696
javanicum, Miq. ... ... „ 696
latifolium, Lindl. ... ... „ 696
sub-bipinnatum, Miq. ... „ 696
sp., Hk. f. & T. ... ... „ 697
Dasystephana adscendens, Borkh. ... ... iv. 117
Datisca, *Linn.* ... ... ii. 656
cannabina, *Linn.* ... ... „ 656
nepalensis, D. Don ... ... „ 657
DATISCACEÆ ... ... ii. 656
Datura, *Linn.* ... ... iv. 242
alba, Nees ... ... „ 243
dubia, G. Don ... ... „ 243
fastuosa, *Linn.* ... ... „ 242
ferox, Nees... ... ... „ 242
Hummatu, Bernh. ... ... „ 242
Metel, *Linn.* ... ... „ 243
Metel, Roxb. ... ... „ 243
Nilhummatu, Dunal ... „ 243
Stramonium, *Linn.* ... „ 242
Tatula, Willd. ... ... „ 242
Wallichii, Dunal ... ... „ 242
Daucus, *Linn.* ... ... ii. 718
Carota, *Linn.* ... ... „ 718
Debregeasia, *Gaud.* ... ... v. 590
bicolor, Wedd. ... ... „ 591
ceylanica, *Hk. f.* ... ... „ 592
dentata, *Hk. f.* ... ... „ 591
hypoleuca, *Wedd.* ... ... „ 591
leucophylla, Wedd. ... ... „ 591
longifolia, Wedd. ... ... „ 590
squamata, *King* ... ... „ 591
velutina, *Gaud.* ... ... „ 590
Wallichiana, *Wedd.* ... „ 591
Wallichiana, Wedd. ... „ 592
Decadontia cærulescens, Griff. iv. 602
Decaisnea, *Hk. f. & T.* ... i. 107
insignis, *Hk. f. & T.* ... „ 107
Decaisnea angulosa, Lindl. vi. 92
Decalepis, *W. & A.* ... ... iv. 11
Hamiltonii, *W. & A.* ... „ 11
Decaneuron angustifolium, Hk. f. & T. ... ... iii. 228

Decaneuron Vol. Page
courtallense, Wight ... ... iii. 227
dendigulense, DC. ... ... „ 238
divergens, DC. ... ... „ 234
Epilejum, DC. ... ... „ 227
glabrum, DC. ... ... „ 259
lilacinum, Dalz. & Gibs. „ 241
microcephalum, Dalz. ... „ 229
molle, Dalz. & Gibs. ... „ 228
molle, DC. ... ... „ 227
molle, Deless, lapsu *Diospermum*... ... ... „ 227
phyllolænum, DC. ... ... „ 228
reticulatum, DC. ... ... „ 227
scabridum, DC. ... ... „ 227
scabridum, Wight ... ... „ 227
? *scariosum*, DC. ... ... „ 236
silhetense, DC. ... ... „ 232
silhetense, Wight ... ... „ 233
Decaschistia, *W. & A.* ... i. 332
crotonifolia, *W. & A.* ... „ 332
trilobata, *Wight* ... ... „ 332
Decaspermum, *Forst.*... ... ii. 469
paniculatum, *Kurz* ... ii. 462, 470
Deeringia, *Br.* ... ... iv. 714
Amherstiana, Wall. ... ... „ 716
baccata, Moq. ... ... „ 714
celosioides, *Br.* ... ... „ 714
indica, Retz. ... ... „ 714
Dehaasia, *Bl.* ... ... v. 125
cuneata, *Bl.* ... ... v. 125, 145
elongata, *Bl.* ... ... v. 126
Kurzii, *King* ... ... „ 125
microcarpa, *Bl.* ... ... „ 126
squarrosa, Zoll. ... ... „ 126
Delima, *Linn.* ... ... i. 31
hebecarpa, DC. ... ... „ 31
intermedia, Bl. ... ... „ 31
sarmentosa, *Linn.* ... ... „ 31
DELIMEÆ ... ... i. 30
Delphinium, *Linn.* ... ... i. 24
Ajacis, Linn. ... ... „ 27
altissimum, *Wall.* ... ... „ 26
Brunonianum, *Royle* ... „ 27
cæruleum, *Jacq.* ... ... „ 25
Carela, Ham. ... ... „ 27
cashmirianum, *Royle* ... „ 26
dasycaulon, *Fres.* ... ... „ 25
denudatum, *Wall.* ... ... „ 25
elatum, *Linn.* ... ... „ 26
glaciale, *Hk. f. & T.* ... „ 27
Hoffmeisteri, Klotz. ... „ 26
incanum, *Royle* ... ... „ 25
incisum, Wall. ... ... „ 26
Jacquemontianum, Camb. i. 26, 27
moschatum, Munro ... ... i. 27
pauciflorum, D. Don... ... „ 27
pauciflorum, Royle ... ... „ 25

Delphinium Vol. Page
penicillatum, Boiss. ... i. 24
penicillatum, Hk. f. & T... ,, 24
pyramidale, Royle ... ... ,, 26
ranunculifolium, Wall. ... ,, 26
rectivenium, Royle ... ... ,, 26
saniculæfolium, *Boiss.* ... ,, 25
scabriflorum, *D. Don* ... ,, 27
uncinatum, *Hk. f. & T.* ... ,, 24
vestitum, *Wall.* ... ... ,, 26
vestitum, Boiss. ... ... ,, 24
viscosum, *Hk. f. & T.* ... ,, 27
Dendrobium, *Sw.* ... ... v. 710
acerosum, *Lindl.* v. 726, vi. 184
aciculare, *Lindl.* ... ... v. 725
acinaciforme, *Roxb.* ... ,, 723
acrobaticum, *Rchb. f.* ... ,, 751
Actinia, Lindl. ... ... ,, 718
aduncum, *Wall.* v. 730, vi. 185
aduncum, Hk. f. ... ... vi. 185
aggregatum, *Roxb.* ... v. 749
aggregatum, Wall. ... ... ,, 749
albidulum, Thw. ... ... ,, 717
albosanguineum, *Lindl.*... ,, 722
album, Wight ... ... ,, 739
aloefolium, Rchb. f. ... ... ,, 723
alpestre, *Royle* ... ... ,, 715
amœnum, *Wall.* ... ... ,, 738
amplum, *Lindl.* ... ... ,, 711
anceps, *Sw.* ... ... ,, 724
Andersonii, *Scott* ... ... vi. 187
angulatum, Wall. ... ... v. 728
Aphrodite, *Rchb. f.* ... ... ,, 743
aqueum, *Lindl.* ... ... ,, 739
Arachnites, *Rchb. f.* ... ,, 734
atropurpureum, *Miq.* ... ,, 724,
vi. 184, 198
attenuatum, Lindl. ... ... v. 727
aurantiacum, *Rchb. f.* ... ,, 751,
vi. 187
aureum, Lindl. ... ... v. 737
bambusæfolium, *Par. & R. f.* ,, 727
barbatulum, *Lindl.* ... ... ,, 719
barbatulum, Batem. ... ,, 719
barbatulum, Wight ... ... ,, 719
Bensoniæ, *Rchb. f.* ... ... ,, 739
bicameratum, *Lindl.* ... ,, 729
bicolor, Lindl. ... ... ,, 799
bifarium, *Lindl.* v. 732, vi. 83, 186
bifarium, Wall. ... ... vi. 83
binoculare, *Rchb. f.* ... v. 747
bolboflorum, *Falc.* v. 729, vi. 184
Boothii, Teysm. & Binn. v. 728
Boxallii, Rchb. f. ... ... ,, 743
braccatum, Lindl. ... ... ,, 787
breviflorum, Lindl. ... ... ,, 729
Brymerianum, *Rchb. f.* ... ,, 745,
vi. 187
Dendrobium Vol. Page
Bulbophylli, Griff. ... ... v. 756
Bullerianum, Batem. ... ,, 743
calcaratum, Lindl. ... ... ,, 726
Calceolaria, *Carey* ... ... ,, 744
Cambridgeanum, Paxt. ... ,, 748
candidum, *Wall.* ... ... ,, 735
capillipes, *Rchb. f.* ... ... ,, 751
cariniferum, *Rchb. f.* ... ,, 720
carnosum, Rchb. f. ... ... vi. 184
Cathcartii, *Hk. f.* v. 727, vi. 184
chlorops, *Lindl.* ... ... v. 719
chrysanthum, *Wall.* ... ,, 747
chryseum, Rolfe v. 748, vi. 187
chrysocrepis, *Par. & R. f.* v. 744
chrysotis, Rchb. f. ... ... ,, 745
chrysotoxum, *Lindl.* ... ,, 750
ciliatum, *Par.* ... ... ,, 719
clavatum, *Wall.* ... ... ,, 746
clavatum, Roxb. ... ... ,, 748
clavipes, *Hk. f.* v. 728, vi. 184
Cœlogyne, *Rchb. f.* ... ... v. 712
cœrulescens, Wall. ... ... ,, 740
compressum, Lindl. ... ... ,, 749
concinnum, Miq. ... ... ,, 724
conostalix, *Rchb. f.* ... ... ,, 726
convexum, Lindl. ... ... ,, 752
cornutum, *Hk. f.* v. 730, vi. 185
crassinode, Bens. & Rchb. f. v. 741
crepidatum, *Lindl.* ... ... ,, 740
crepidatum, Griff. ... ... ,, 751
cretaceum, *Lindl.* ... ... ,, 736
? *criniferum*, Lindl. v. 746, vi. 187
crispum, Dalz. ... ... v. 716
crocatum, *Hk. f.* ... ... vi. 185
cruentum, *Rchb. f.* ... ... v. 736
crumenatum, *Sw.* ... ... ,, 729,
vi. 184, 187
crystallinum, *Rchb. f.* ... v. 739
cucullatum, Br. ... ... ,, 739
cumulatum, *Lindl.* v. 731, vi. 185
cupreum, Herbert ... ... v. 744
cuspidatum, *Lindl.* ... ... ,, 716
cuspidatum, Lindl. ... ... ,, 724
cymbidioides, Lindl. ... ,, 713
Dalhousieanum, *Wall.* v. 743, vi. 186
Dalzellii, Hook. ... ... v. 789
demissum, D. Don ... ... ,, 783
densiflorum, *Wall.* ... ... ,, 748
denudans, *D. Don* ... ... ,, 715
denudans, Wall. ... ... ,, 715
Devonianum, *Paxt.* v. 743, vi. 186
Diodon, *Rchb. f.* ... ... v. 717
dixanthum, *Rchb. f.* v. 746, vi. 187
draconis, *Rchb. f.* ... ... v. 722
eburneum, Rchb. f. ... ... ,, 722
Egertoniæ, Lindl. ... ... ,, 738
eriæflorum, *Griff.* ... ... ,, 715

Dendrobium Vol. Page
eulophotum, *Lindl.* ... ... v. 723
excisum, Lindl. ... ... „ 733
extinctorium, Lindl. ... „ 788
Falconeri, *Hook.* ... ... „ 742
Farmeri, *Paxt.* ... ... „ 750
filiforme, Wight ... ... „ 789
fimbriatum, *Hook.* ... ... „ 745
fimbriatum, Dalz. ... ... „ 789
fimbriatum, Lindl. ... ... „ 714
Findleyanum, *Par. & R. f.* „ 742
Flabellum, Rchb. f. ... ... „ 714
flavidulum, *Ridl.* ... ... vi. 185
flexuosum, Griff. ... ... v. 720
flexuosum, Wall. ... ... „ 729
floribundum, *D. Don* ... „ 751
formosum, *Roxb.* v. 721, vi. 187
fugax, *Rchb. f.* ... ... v. 752
fuscatum, Lindl. ... ... „ 746
fuscescens, *Griff.* ... ... „ 712
Fytcheanum, *Batem.* ... „ 719
gemellum, *Lindl.* ... ... „ 727
geminatum, *Lindl.* v. 713, vi. 183
Gibsonii, *Lindl.* ... ... v. 746
graminifolium, *Wight* ... „ 718
grande, *Hk. f.* ... v. 724, vi. 184
grandiflorum, Reinw. ... v. 755
gratiosissimum, *Rchb. f.* ... „ 743
Griffithianum, *Lindl.* ... „ 749
Guibertii, Carr. ... ... „ 749
hæmoglossum, *Thw.* ... „ 727
Hanburyanum, Rchb. f. ... „ 740
Harveyanum, *Rchb. f.* ... „ 747
hedyosmum, Batem. ... „ 735
Henshalli, Rchb. f. ... ... „ 738
herbaceum, *Lindl.* ... ... „ 719
hercoglossum, *Rchb. f.* v. 730, vi. 185
heterocarpum, *Wall.* ... v. 737
Heyneanum, *Lindl.* ... „ 718
hirsutum, Griff. ... ... „ 720
Hookerianum, *Lindl.* ... „ 745
Hughii, *Rchb. f.* v. 752, vi. 187
humile, Wight ... ... v. 716
hymenanthum, *Hk. f.* v. 732, vi. 185
hymenopterum, *Hk. f.* ... vi. 185
inauditum, Rchb. f. ... ... „ 183
incurvum, *Lindl.* ... ... v. 718
Infundibulum, *Lindl.* ... „ 721
Infundibulum, Rchb. f. ... „ 721
ionopus, *Rchb. f.* v. 732, vi. 186
Jamesianum, Rchb. f. ... v. 721
Jenkinsii, T. Anders. ... „ 731
Jenkinsii, Wall. ... ... „ 750
Jerdonianum, *Wight* ... „ 734
junceum, *Lindl.* ... ... „ 726
kentrochilum, *Hk. f.* v. 731, vi. 185
kentrophyllum, *Hk. f.* v. 725, vi. 184
Kuhlii, Lindl. ... ... v. 731

Dendrobium Vol. Page
Kunstleri, *Hk. f.* v. 714, vi. 184
lamellatum, *Lindl.* ... ... v. 749
lasioglossum, *Rchb. f.* ... „ 734
Lawanum, Lindl. ... ... „ 740
Leonis, *Rchb. f.* v. 723, vi. 184
leopardinum, Wall. ... ... v. 756
leucochlorum, *Rchb. f.* ... „ 752
Lindleyanum, Griff. ... ... „ 740
Lindleyi, Steud. ... ... „ 750
lituiflorum, *Lindl.* ... ... „ 740
Lobbii, *Teysm. & Binn.* v. 728, vi. 184
Loddigesii, *Rolfe* ... ... vi. 187
lonchophyllum, *Hk. f.* v. 714, vi. 184
longicolle, *Lindl.* v. 712, vi. 183
longicornu, *Lindl.* ... ... v. 720
longipes, *Hk. f.* v. 713, vi. 183
Lubbersianum, *Rchb. f.* ... v. 722
luteolum, *Batem.* ... ... „ 733
Macarthiæ, *Thw.* .. ... „ 736
Macraei, *Lindl.* v. 714, vi. 184
macropodum, *Hk. f.* v. 713, vi. 183
macrostachyum, *Lindl.* ... v. 735
marginatum, Batem. ... „ 733
marmoratum, *Rchb. f.* ... „ 738
megaceras, *Hk. f.* v. 731, vi. 185
melanophthalmum, Rchb. f. v. 741
mesochlorum, Lindl. ... „ 738
metachilinum, *Rchb. f.* ... „ 733
micranthum, Griff. ... ... „ 723
microbulbon, *A. Rich.* ... „ 716
microchilos, Dalz. ... ... „ 789
miserum, *Rchb. f.* ... ... „ 717
moschatum, Wall. v. 744, vi. 185
moulmeinense, *Par.* v. 746, vi. 187
multiflorum, Par. & Rchb. f. v. 724
muscicola, Lindl. ... ... „ 789
Myosurus, Sw. ... ... „ 685
nanum, *Hk. f.* ... ... „ 717
Nathanielis, *Rchb. f.* ... „ 724
nobile, *Lindl.* ... ... „ 740
nodatum, Lindl. ... ... „ 743
nodosum, Dalz. ... ... „ 714
normale, *Falc.* ... ... „ 748
nutans, *Lindl.* ... ... „ 734
ochreatum, *Lindl.* ... ... „ 747
pachyglossum, *Par. & Rchb. f.* „ 727
palpebræ, *Lindl.* ... ... „ 750
panduratum, *Lindl.* ... „ 717
panduriferum, *Hk. f.* ... vi. 186
parciflorum, *Rchb. f.* ... v. 725
parcum, *Rchb. f.* ... ... „ 720
pardalinum, Rchb. f. ... „ 714
Parishii, *Rchb. f.* ... ... „ 740
parviflorum, *D. Don* ... „ 752
Paxtoni, Lindl. ... ... „ 747
Paxtoni, Paxt. ... ... „ 745
peguanum, Lindl. ... ... „ 717

Dendrobium Vol. Page
pendulum, *Roxb.* v. 741, vi. 186
perakense, *Hk. f.* v. 712, vi. 183
Perula, *Rchb. f.* v. 732, vi. 186
pictum, Griff. ... ... v. 743
Pierardi, *Roxb.* ... ... „ 738
podagraria, *Hk. f.* v. 728, vi. 184
polyanthum, Lindl. ... ... v. 751
? *polyanthum*, Wall. ... „ 741
polyphlebium, Rchb. f. ... „ 741
polystachys, Thou. ... ... vi. 21
porphyrochilum, *Lindl.* ... v. 716
præcinctum, *Rchb. f.* ... „ 752
primulinum, *Lindl.* ... ... „ 735
? *pubescens*, Hook. ... ... „ 801
pulchellum, *Roxb.* .. ... vi. 186
pulchellum, Lindl. ... ... v. 743
pumilum, *Roxb.* ... v. 713, vi. 184
pumilum, Par. & Rchb. f. v. 714
purpurascens, Thw. ... ... „ 842
? *pusillum*, D. Don ... ... „ 715
pycnostachyum, *Lindl.* ... „ 718
pygmæum, *Lindl.* ... ... „ 717
quadrangulare, *Par.* v. 714, vi. 184
Rabani, Lindl. ... ... v. 714
ramosissimum, Wight ... „ 720
ramosum, *Lindl.* ... ... „ 736
revolutum, *Lindl.* ... ... „ 732
rhodocentrum, *Rchb. f.* ... „ 731
rhodopterygium, *Rchb. f.* „ 741
rhombeum, Lindl. .. ... „ 737
rotundatum, *Benth.* ... ... „ 712
Ruckeri, *Lindl.* ... ... „ 733
sanguinolentum, *Lindl.* ... „ 731
scabrilingue, *Lindl.* ... „ 735
Scortechini, *Hk. f.* ... ... „ 741
secundum, *Wall.* ... ... „ 730
senile, *Par. & Rchb f.* ... „ 751
seriatum, Wall. ... ... „ 796
Serra, *Lindl.* ... ... „ 722
sinuatum, *Lindl.* ... ... „ 724
Spatella, *Rchb. f.* ... ... „ 725
spathaceum, *Lindl.* ... „ 737
sphegidiglossum, *Rchb. f.* „ 737, vi. 186
striatum, Griff. ... ... v. 755
strongylanthum, *Rchb. f.* „ 716
stuposum, *Lindl.* v. 737, vi. 186
suavissimum, Rchb. f. . v. 750
subteres, Lindl. ... ... vi. 184
subulatum, Hk. f. v. 726, vi. 184
subulatum, *Lindl.* ... ... vi. 184
sulcatum, *Lindl.* ... ... v. 749
tenuicaule, *Hk. f.* ... ... vi. 184
teres, *Lindl.* ... ... v. 726
teres, Roxb. ... ... vi. 49
terminale, *Par. & Rchb. f.* v. 725
Teysmanni, Miq. ... ... vi. 184

Dendrobium Vol. Page
thyrsiflorum, Rchb. f. ... v. 748
tortile, *Lindl.* ... ... „ 744
transparens, *Wall.* ... ... „ 738
trigonopus, *Rchb. f.* ... „ 751
tripetaloides, Roxb. ... ... „ 765
tripterum, Wall. ... ... „ 780
tropæoliflorum, *Hk. f.* ... vi. 186
tuberiferum, *Hk. f.* v. 728, vi. 184
uniflorum, Griff. ... ... v. 732
vaginatum, Wall. ... ... vi. 83
veratrifolium, Roxb. ... ... „ 191
vestitum, Wall. ... ... v. 806
vexabile, *Rchb. f.* ... ... v. 752
villosulum, *Wall.* ... ... „ 728
virgineum, *Rchb. f.* ... ... „ 722
Wardianum, *Warn.* v. 742, vi. 186
Wardianum, Warn. ... ... v. 741
Wattii, *Rchb. f.* ... ... „ 721
Williamsoni, *Day & Rchb. f.* „ 721
xanthophlebium, *Lindl.* ... „ 733
xantholeucum, Rchb. f. ... „ 752
sp., Griff. v. 718, 737, 738, 744, 745
Dendrocalamus, *Nees* ... ... vii. 403
Balcooa, Voigt ... ... „ 391
Brandisii, *Kurz* ... ... „ 407
calostachyus, *Kurz* ... ... „ 407
Collettianus, *Gamble* ... „ 408
criticus, Kurz ... ... „ 389
flagellifer, *Munro* ... ... „ 408
giganteus, *Munro* ... ... „ 406
Griffithianus, Kurz ... ... „ 394
Hamiltonii, *Nees & Arn.* .. „ 405
Hookeri, *Munro* ... ... „ 405
latiflorus, *Munro* ... ... „ 407
longifimbriatus, *Gamble* ... „ 408
longispathus, *Kurz* ... ... „ 407
membranaceus, *Munro* ... „ 404
monadelphus, Thw. ... ... „ 402
Parishii, *Munro* ... ... „ 403
patellaris, *Gamble* ... ... „ 406
sericeus, *Munro* ... ... „ 404
sikkimensis, *Gamble* ... „ 405
strictus, *Nees* ... ... „ 404
Tulda, Voigt ... ... „ 387
Dendrochilum, *Bl.* ... ... v. 782
bracteosum, *Rchb. f.* ... „ 782
fuscum, Teysm. & Binn. ... vi. 190
linearifolium, *Hk. f.* v. 782, vi. 190
pallidiflavens (pallidiflorum), *Bl.* ... ... v. 782
roseum, Dalz. ... ... „ 740
Dendrocnide crenulata, Miq. v. 550
Dendrocolla amplexicaulis, Bl. vi. 40
Arachnites, Bl. ... ... „ 41
Hystrix, Bl. ... ... „ 39
pulchella, Thw. ... ... „ 39
serræformis, Lindl. ... ... „ 41

Dendrocolla Vol. Page
teres, Bl. ... vi. 34
Dendrolirion, Lindl. ... v. 786
Dendrolobium Cephalotes, Benth. ... ii. 162
umbellatum, Benth. ... „ 161
Dendropanax, *Dcne. & Planch.* ... ii. 733
japonicum, *Seem* ... „ 733
parviflorum, *Benth.* ... „ 733
proteum, Benth. ... „ 733
Dendrophthoe coccinea, G.Don v. 206
farinosa, Miq. ... „ 216
furruginea, G. Don ... „ 210
fusca, Miq. ... „ 210
macrocalyx, Miq. ... „ 208
obovata, Miq. ... „ 209
Oortiana, Miq. ... „ 210
pentandra, Miq. ... „ 216
pentapetala, G. Don ... „ 206
pulcher, Miq. ... „ 205
Dendrotrophe buxifolia, Miq. v. 234
varians, Miq. ... „ 233
Dentaria dasyloba, Turcz. ... i. 139
Dentella, *Forst.* ... iii. 42
erecta, Roth ... „ 428
repens, *Forst.* ... „ 42
Derris, *Lour.* ... ii. 240
acuminata, *Benth.* ... „ 247
affinis, Benth. ... „ 242
amœna, *Benth.* ... „ 245
brevipes, *Baker* ... „ 244
canarensis, *Baker* ... „ 246
cuneifolia, *Benth.* ... „ 243
dalbergioides, *Baker* ... „ 241
discolor, *Benth.* ... „ 242
elegans, *Benth.* ... „ 242
elliptica, *Benth.* ... „ 243
eualata, *Bedd.* ... „ 244
ferruginea, *Benth.* ... „ 245
Heyneana, *Benth.* ... „ 244
Maingayana, *Baker* ... „ 245
marginata, *Benth.* ... „ 245
microptera, *Benth.* ... „ 243
oblonga, *Benth.* ... „ 242
ovalifolia, *Benth.* ... ii. 243, 247
paniculata, *Benth.* ... ii. 242
parviflora, *Benth.* ... „ 240
pinnata, Lour. ... „ 234
platyptera, *Baker* ... „ 245
polystachya, *Benth.* ... „ 247
robusta, *Benth.* ... „ 241
scandens, *Benth.* ... „ 240
secunda, *Baker* ... „ 247
sinuata, *Thw.* ... „ 246
thyrsiflora, *Benth.* ... „ 246
trifoliata, Lour. ... „ 242
uliginosa, *Benth.* ... „ 241
Derris Vol. Page
vestita, *Baker* ... ii. 242
Wightii, *Baker* ... „ 247
Deschampsia, *Beauv.* ... vii. 273
aralensis, Regel ... „ 359
Biebersteiniana, Sch. f. ... „ 273
brevifolia, Br. ... „ 273
cæspitosa, *Beauv.* ... „ 273
kœlerioides, *Regel* ... „ 273
sp., **Wall.** ... vii. 273, 344
Desmanthus, *Willd.* ... ii. 290
Adenanthera, Wall. ... „ 286
cinereus, Willd. ... „ 288
lacustris, DC. ... „ 285
leptophyllus, DC. ... „ 290
natans, Willd. ... „ 285
plenus, DC. ... „ 286
polyphyllus, DC. ... „ 286
punctatus, DC. ... „ 286
stolonifer, DC. ... „ 285
strictus, DC. ... „ 290
triquetrus, Willd. ... „ 286
virgatus, *Willd.* ... „ 290
Desmazeria unioloides, Defl. vii. 328
Desmocarpus missionis, Wall. i. 172
Desmochæta alternifolia, DC. iv. 718
atropurpurea, DC. ... „ 723
ciliata, R. & S. ... „ 718
flavescens, DC. ... „ 724
micrantha, DC. ... „ 723
muricata, Wight ... „ 718
orbiculata, Wall. ... „ 724
patula, R. & S. ... „ 724
patula, ? Wall. ... „ 723
prostrata, DC. ... „ 723
prostrata, Wight ... „ 723
repens, R. & S. ... „ 723
tomentosa, R. & S. ... „ 722
velutina, Wall. ... „ 724
Desmodium, *Desv.* ... ii. 161
abyssinicum, DC. ... „ 166
alatum, DC. ... „ 163
amœnum, Wall. ... „ 170
angulatum, DC. ... „ 167
angulatum, Wall. ii. 144, 171, 172
Aparines, Hassk. ... ii. 164
argenteum, Wall. ... „ 168
auricomum, *Grah.* ... „ 172
auriculatum, DC. ... „ 163
australe, Hassk. ... „ 162
bambusetorum, Miq. ... „ 165
barbatum, Wall. ... „ 167
biarticulatum, *Benth.* ... „ 163
bicolor, Wall. ... „ 164
brachystachyum, *Grah.* ... „ 171
Buergeri, Miq. ... „ 171
cæspitosum, DC. ... „ 173
caffrum, E. & Z. ... „ 166

Desmodium Vol. Page
cajanifolium, DC. ... ... ii. 161
capitatum, *DC.* ... ... ,, 170
cateniferum, Arn. ... ... ,, 163
Cephalotes, *Wall.* ... ... ,, 161
collinum, Wall. ... ... ,, 168
concinnum, *DC.* ... ... ,, 170
confertum, *DC.* ... ... ,, 167
congestum, Benth. ... ... ,, 152
congestum, Wall. .. ... ,, 162
dasyphyllum, Miq. ... ... ,, 156
dichotomum, *DC.* ... ... ,, 169
diffusum, DC. ... ... ,, 169
diffusum, DC. ... ... ,, 164
distans, Royle ... ... ,, 172
dolabriforme, *Benth.* ... ,, 165
dubium, Lindl. ... ... ,, 167
elongatum, Wall. ... .. ,, 164
ferrugineum, Wall. ... ... ,, 171
flexuosum, *Wall.* ... ... ,, 168
floribundum, *G. Don* ... ,, 167
gangeticum, *DC.* ... ... ,, 168
Gardneri, *Benth.* ... ... ,, 165
grande, *Kurz* ... ... ,, 162
Griffithianum, *Benth.* ... ,, 171
gyrans, *DC.* ... ... ,, 174
gyroides, *DC.* ... ... ,, 175
gyroides, Hassk. ... ... ,, 171
heterocarpum, DC. ... ... ,, 171
heterophyllum, *DC.* ... ,, 173
heterophyllum, Wall. ... ,, 173
Horsfieldii, Miq. ... ... ,, 156
japonicum, Miq. ... ... ,, 165
jucundum, *Thw.* ... ... ,, 172
laburnifolium, *DC.* ... ... ,, 163
lasiocarpum, DC. ... ... ,, 169
latifolium, *DC.* ... ... ,, 168
latifolium, Wight ... ... ,, 168
laxiflorum, *DC.* ... ... ,, 164
laxum, DC. .. .. ,, 165
leptostachyum, Wall. ii. 161, 164
Leschenaultii, DC. ... ... ii. 154
lineatum, Span. ... ... ,, 162
maculatum, DC. ... ... ,, 168
microphyllum, Miq. ... ... ,, 174
multiflorum, DC. ... ... ,, 167
nervosum, Vogel ... ... ,, 171
nutans, Wall. ... ... ,, 168
obcordatum, *Kurz* ... ... ,, 166
oblatum, *Baker* ... ... ,, 166
oblongum, *Wall.* ... ... ,, 166
obovatum, Wall. ... ... ,, 170
orbiculatum, Wall. ... ... ,, 170
ormocarpoides, *DC.* ... ,, 164
ovalifolium, Wall. ... ... ,, 171
oxyphyllum, *DC.* ... ... ,, 167
parviflorum, *Baker* ... ... ,, 172
parvifolium, *DC.* ... ... ,, 174

Desmodium Vol. Page
patens, Wight ... ... ii. 171
paucinervium, DC. ... ... ,, 170
penduliflorum, Wall. ... ,, 170
pendulum, Wall. ... ... ,, 170
podocarpum, *DC.* ... ... ,, 165
podocarpum, Miq. ... ... ,, 165
polycarpum, *DC.* ... ... ,, 171
polycarpum, W. & A. ... ,, 170
polycarpum, Wall. ... ... ,, 167
præmorsum, Grah. ... ii. 154, 174
Pryoni, DC. ... ... ii. 169
Pseudo-gyroides, Miq. ... ,, 175
Pseudo-triquetrum, DC. ... ,, 163
pulchellum, *Benth.* ... ... ,, 162
punctatum, DC. ... ... ,, 226
quinquangulare, Wight ... ,, 169
recurvatum, Grah. ... ... ,, 164
reniforme, *DC.* ... ... ,, 173
repandum, DC. ... ... ,, 166
retroflexum, *DC.* ... ... ,, 170
retusum, G. Don ... ... ,, 171
Rottleri, *Baker* ... ... ,, 174
Rottleri, G. Don ... ... ,, 164
rotundifolium, *Baker* ... ,, 172
rotundifolium, Wall. ... ,, 170
Roxburghii, Wall ... ... ,, 169
Roylei, W. & A. ... ... ,, 175
rufescens, *DC.* ... ... ,, 171
sambuense, DC. ... ... ,, 167
Scalpe, *DC.* ... ... ,, 165
Schimperi, Hochst. ... ... ,, 166
scoparium, Wall. ... ... ,, 174
sequax, *Wall.* ... ... ,, 170
sericatum, Presl ... ... ,, 162
serpens, Wall. ... ... ,, 172
serriferum, Wall. ... ... ,, 167
siliquosum, DC. .. ... ,, 171
sinuatum, *Bl.* ... ... ,, 166
spirale, *DC.* ... ... ,, 164
stipulaceum, Hassk. ... ,, 174
strangulatum, W. & A. ... ,, 165
sulcatum, Wall. ... ... ,, 164
tenue, Grah. ... ... ,, 172
teres, *Wall.* ... ... ,, 164
Thwaitesii, *Baker* .. ... ,, 169
tiliæfolium, *G. Don* ... ,, 168
trichocaulon, DC. ... .. ,, 172
trichocaulon, Hassk. ... ,, 165
triflorum, *DC.* ... ... ,, 173
triflorum, Wall. ... ... ,, 173
trinerve, Grah. ... ... ,, 165
triquetrum, *DC.* ... ... ,, 163
umbellatum, *DC.* ... ... ,, 161
vestitum, *Benth.* ... ... ,, 162
virgatum, Zolling. ... ... ,, 169
viscidum, DC. ... ... ,, 154
viticinum, Wall. ... ... ,, 163

Desmodium ... Vol. Page
Walkeri, Arn. ... ii. 169
Wightii, *Grah.* ... „ 169
Willdenovii, G. Don ... „ 169
zonatum, Miq. ... „ 164
Desmostemon zeylanicus, Thw. v. 400
Desmotrichum fimbriatum, Bl. v. 714
geminatum, Bl. ... vi. 183
Detarium zeylanicum, Thw. ii. 271
Deutzia, *Thunb.* ... ii. 406
Brunoniana, Wall. ... „ 407
corymbosa, *Br.* ... „ 406
corymbosa, Lindl. ... „ 407
macrantha, *Hk. f. & T.* ... „ 407
? *parviflora*, Bunge ... „ 406
staminea, *Br.* ... „ 407
Deyeuxia, *Clar.* ... vii. 265
abnormis, *Hk. f.* ... „ 268
compacta, *Munro* ... „ 267
elatior, *Hk. f.* ... „ 266
filiformis, *Hk. f.* ... „ 268
Griffithii, Munro ... „ 263
japonica, Spreng. ... „ 146
nivicola, *Hk. f.* ... „ 267
pulchella, *Hk. f.* ... „ 268
scabrescens, *Munro* ... „ 267
sylvatica, *Kunth* ... „ 266
Treutleri, *Stapf* ... „ 269
triaristata, *Hk. f.* ... „ 266
sp., Hk. f. & T. vii. 266, 267, 268
Diacicarpium rotundifolium, Hassk. ... ii. 743
tomentosum, Bl. ... „ 743
Dialium, *Linn.* ... ii. 269
indum, Linn. ... „ 269
laurinum, *Baker* ... „ 269
Maingayi, *Baker* ... „ 269
ovoideum, *Thw.* ... „ 269
patens, *Baker* ... „ 270
platysepalum, *Baker* ... „ 270
Dianella, *Lamk.* ... vi. 336
ensifolia, *Redouté* ... „ 337
javanica, Kunth ... „ 337
nemorosa, Lamk. ... „ 337
odorata, Bl. ... „ 337
sandvicensis, Hook. & Arn. „ 337
DIANTHEÆ ... i. 212
Dianthera, *Linn.* ... iv. 541
bicalyculata, Retz. ... „ 554
collina, *Clarke* ... „ 543
debilis, *Clarke* ... „ 542
dichotoma, *Clarke* ... „ 543
Griffithii, *Benth.* ... „ 542
? indica, *Clarke* ... „ 543
japonica, Thunb. ... „ 556
leptostachya, *Benth.* ... „ 542
malabarica, Linn. f. ... „ 554
paniculata, Lour. ... „ 541

Dianthera ... Vol. Page
tomentosa, Roxb. ... iv. 395
virgata, *Benth.* ... „ 542
Dianthus, *Linn.* ... i. 213
anatolicus, *Boiss.* ... „ 214
angulatus, *Royle* ... „ 215
barbatus, Linn. ... „ 215
cachemiricus, *Edgew.* ... „ 214
Caryophyllus, *Linn.* ... „ 214
caucasicus, Sims ... „ 215
chinensis, Linn. ... „ 213
crinitus, *Sm.* ... „ 215
deltoides, *Linn.* ... „ 214
Falconeri, *Edgew.* ... „ 214
fimbriatus, *Biebr.* ... „ 215
glaucus, Ham. ... „ 213
incertus, Jacq. ... „ 215
Jacquemontii, *Edgew.* ... „ 214
Liboschitzianus, Ser. ... „ 214
Seguieri, *Vill.* ... „ 215
Diapensia, *Linn.* ... iii. 478
himalaica, *Hk. f. & T.* ... „ 478
DIAPENSIACEÆ ... iii. 478
Diaphora cochinchinensis, Lour. ... vi. 690
Diarthron, *Turcz.* ... v. 196
carinatum, J. & S. ... „ 196
vesiculosum, *Fisch. & Mey.* „ 196
Diastemanthe platystachys, Steud. ... vii. 91
Dicælospermum, *Clarke* ... ii. 630
Ritchiei, *Clarke* ... „ 630
Dicalyx javanicus, Bl. ... iii. 574
tinctorius, Bl. ... „ 574
Dicellostyles, *Benth.* ... i. 333
axillaris, *Benth.* ... „ 333
jujubifolia, *Benth.* ... „ 333
Dicentra, *Borkh.* ... i. 120
Roylei, *Hk. f. & T.* ... „ 121
scandens, *Walp* ... „ 121
thalictrifolia, *Hk. f. & T.* „ 121
torulosa, *Hk. f. & T.* ... „ 121
Dicerma biarticulatum, DC. ii. 163
pulchellum, DC. ... „ 162
repens, Grah. ... „ 173
vestitum, Wall. ... „ 162
Diceros angustifolius, Wall. ... iv. 275
longifolius, Pers. ... „ 275
Dicerostylis lanceolata, Bl. ... vi. 110
Dichæspermum aurantiacum, Hassk. ... vi. 378
Blumei, Hassk. ... „ 380
giganteum, Hassk. ... „ 376
juncoides Wight ... „ 381
Kœnigii, Hassk. ... „ 381
lanceolatum, Wight ... „ 381
ochraceum, Hassk. ... „ 380
paniculatum, Hk. f. & T. „ 381

Dichæspermum Vol. Page
repens, Clarke ... vi. 380
repens, Hassk. ... „ 378
repens, Wight ... „ 380
semiteres, Hassk. ... „ 381
Dichætaria, *Steud.* ... vii. 300
Wightii, *Nees* ... „ 300
Dichanthium, Hack. ... vii. 195
nodosum, Uster. ... „ 196
Dichelactina (*Dichelastina*)
nodicaulis, Hance ... v. 289
Dichilanthe, *Thw.* ... iii. 128
zeylanica, *Thw.* ... „ 128
Dichodon (lapsu *Diplodon*)
cerastioides, Rchb. ... i. 227
Dichopsis, *Thw.* ... iii. 540
? *caloneura*, Hk. f. ... „ 546
canaliculata, *Benth.* ... „ 541
elliptica, *Benth.* ... „ 542
grandis, *Benth.* ... „ 540
Gutta, *Benth.* ... „ 543
Helferi, *Clarke* ... „ 542
hexandra, *Clarke* ... „ 543
lævifolia, *Benth.* ... „ 541
lanceolata, *Benth.* ... „ 541
Maingayi, *Clarke* ... „ 543
obovata, *Clarke* ... „ 542
pauciflora, *Benth.* ... „ 541
petiolaris, *Thw.* ... „ 540
polyantha, *Benth.* ... „ 542
rubens, *Clarke* ... „ 543
rubiginosa, *Benth.* ... „ 541
Dichostylis Micheliana, Nees vi. 662
pygmæa, Nees ... „ 596
Dichotomanthes, Kurz ... ii. 581
Dichroa, *Lour.* ... ii. 406
cyanitis, Miq. ... „ 406
febrifuga, *Lour.* ... „ 406
latifolia, Miq. ... „ 406
Dichrocephala, *DC.* ... iii. 245
Benthamii, *Clarke* ... „ 246
chrysanthemifolia, *DC.* ... „ 245
gracilis, DC. ... „ 245
grangeæfolia, DC. ... „ 245
Hamiltoni, *Hk. f.* ... „ 246
latifolia, *DC.* ... „ 245
nilagirensis, Sch. Bip. ... „ 245
oblongata, Benth. ... „ 245
Schmidtii, Wight ... „ 317
sonchifolia, DC. ... „ 245
tanacetoides, Sch. Bip. ... „ 245
Dichrostachys, *DC.* ... ii. 288
cinerea, *W. & A.* ... „ 288
Dichrotrichum Griffithii,
Clarke ... iv. 344
Diclidium ferox, Schrad. ... vi. 624
Dicliptera, *Juss.* ... iv. 550
Beddomei, *Clarke* ... „ 551

Dicliptera Vol. Page
bivalvis, Juss. ... iv. 552
bivalvis, Nees ... „ 552
bupleuroides, Nees ... „ 554
Burmanni, T. Anders. ... „ 553
Burmanni, Nees ... „ 553
cardiocarpa, Nees ... „ 554
cærulea, Bl. ... „ 550
crinita, Nees ... „ 554
cuneata, *Nees* ... „ 552
hirtula, Nees ... „ 554
Kurzii, *Clarke* ... „ 551
Leonotis, *Dalz.* ... „ 553
micranthes, *Nees* ... „ 553
parvibracteata, *Nees* ... „ 551
repens, R. & S. ... „ 549
reptans, *Nees* ... „ 552
riparia, *Nees* ... „ 553
Roxburghiana, *Nees* ... „ 553
Roxburghiana, Boiss. ... „ 554
Roxburghii, T. Anders. ... „ 554
rupestris, Nees ... „ 554
speciosa, *Kurz* ... „ 552
zeylanica, *Nees* ... „ 552
sp., Hk. f. & T. ... „ 547
Dicoma, *Cass.* ... iii. 387
lanuginosa, DC. ... „ 387
tomentosa, *Cass.* ... „ 387
Dicræa algæformis, Bedd. ... v. 65
apicata, Tul. ... „ 68
dichotoma, Tul. ... „ 64
elongata, Tul. ... „ 65
longifolia, Wight ... „ 64
minor, Wedd. ... „ 67
pterophylla, Wedd. ... „ 67
rigida, Tul. ... „ 64
selaginoides, Wedd. ... „ 68
stylosa, Wight ... „ 65
Wallichii, Tul. ... „ 67
Wightii, Tul. ... „ 64
Dicranacanthus buxifolius,
Oerst. ... iv. 483
Spina-ceylanica, Oerst. ... „ 484
Dicranostigma lactucoides,
Hk. f. & T. ... i. 119
Dictamnus, *Linn.* ... i. 487
albus, *Linn.* ... „ 487
Fraxinella, Pers. ... „ 487
himalayensis, Royle ... „ 487
Dictyocarpus truncatus, Wight i. 322
? *Dictyodaphne Candolleana*,
Meissn. ... v. 125
Dictyospermum conspicuum,
Hassk. ... vi. 382
montanum, Wight ... „ 382
ovalifolium, Wight ... „ 382
ovatum, Hassk. ... „ 382
protensum, Wight ... „ 382

Dictyospermum Vol. Page
Wightii, Hassk. ... vi. 368, 382
Didactylon ramosum, Zoll. & Mor. ... vii. 104
simplex, Zoll. & Mor. ... „ 104
Didissandra, *Clarke* ... iv. 355
frutescens, *Jack* ... „ 355
lanuginosa, *Clarke* ... „ 355
rufa, *King* ... „ 355
Didymocarpoid, Griff. ... iv. 349, 355
Didymocarpus, *Wall.* ... iv. 345
acuminata, *Br.* ... „ 349
Andersoni, *Clarke* ... „ 346
aromatica, *Wall.* ... „ 347
aromatica, D. Don ... „ 348
aromatica, Wall. ... „ 346
aurantiaca, *Clarke* ... „ 346
barbinerva, *Clarke* ... „ 350
cinerea, *D. Don* ... „ 346
corchorifolia, *Wall.* ... „ 351
cordata, *Wall.* ... „ 350
crinita, *Jack* ... „ 351
cristata, Dalz. ... „ 360
floccosa, *Thw.* ... „ 354
Griffithii, Wight ... „ 344
hamosa, Wall. ... „ 360
Hookeri, *Clarke* ... „ 349
Humboldtiana, *Gardn.* ... „ 353
incana, *Benth.* ... „ 352
Kurzii, Clarke ... „ 358
lanuginosa, Wall. ... „ 355
leucocalyx, *Clarke* ... „ 348
longepetiolata, Gardn. ... „ 354
longipes, *Clarke* ... „ 351
lyrata, *Wight* ... „ 353
macrophylla, *Wall.* ... „ 345
macrophylla, Wall. ... „ 345
marginata, *Clarke* ... „ 352
membranacea, Bedd. ... „ 354
missionis, *Wall.* ... „ 354
mollis, *Wall.* ... „ 350
Mortoni, *Clarke* ... „ 348
multiflora, Wall. ... „ 365
oblonga, *Wall.* ... „ 346
obtusa, Wall. ... „ 346
ovalifolia, *Wight* ... „ 354
paucinerva, *Clarke* ... „ 350
pedicellata, *Br.* ... „ 345
platycalyx, *Clarke* ... „ 349
platypus, *Clarke* ... „ 352
plicata, D. Don ... „ 346
podocarpa, *Clarke* ... „ 347
primulæfolia, Gardn. ... „ 354
primulifolia, D. Don iv. 347, 348
pulchra, *Clarke* ... iv. 348
punduana, *Wall.* ... „ 349
pygmæa, *Clarke* ... „ 345
repens, *Bedd.* ... „ 354
Didymocarpus Vol. Page
reptans, *Jack* ... iv. 352
Rottleriana, *Wall.* ... „ 353
Rottleriana, Wight ... „ 353
rufipes, *Clarke* ... „ 351
semitorta, *Clarke* ... „ 352
subalternans, *Wall.* ... „ 347
subalternans, Clarke ... „ 348
tomentosa, *Wight* ... „ 353
verticillata, Wall. ... „ 347
villosa, *D. Don* ... „ 347
villosa, Clarke ... „ 348
zeylanica, *Br.* ... „ 354
sp., Griff. ... „ 358
sp., Hk. f. & T. iv. 346, 348, 349, 357
Didymococcus Danura, Bl. ... i. 684
verticillatus, Bl. ... „ 684
Didymogyne abyssinica, Wedd. v. 593
boehmerioides, Wall. ... „ 576
Didymoplexis, *Griff.* ... vi. 121
pallens, *Griff.* ... „ 122
Didymosperma, *H. Wdl. & Dr.* vi. 420
gracilis, *Hk. f.* ... „ 420
hastata, *Becc.* ... „ 420
Hookeriana, *Becc.* ... „ 420
nana, *H. Wdl. & Dr.* ... „ 420
Diectomis fastigiata, H.B.& K. vii. 167
Dielytra scandens, D. Don ... i. 121
Dienia congesta, Lindl. ... v. 690
cylindrostachya, Lindl. ... „ 689
fusca, Lindl. ... „ 690
muscifera, Lindl. ... „ 689
Diesingia scandens, Endl. ... ii. 212
Digera, *Forsk.* ... iv. 717
alternifolia, Aschers. ... „ 718
arvensis, *Forsk.* ... „ 717
ciliata, Mart. ... „ 718
ciliata, Moq. ... „ 718
Forskalii, Bl. ... „ 718
muricata, Mart. ... „ 718
DIGITALEÆ ... iv. 248, 288
Digitalis stricta, Roxb. ... iv. 301
Digitaria ægyptiaca, Willd. vii. 13
affinis, R. & S. ... „ 30
australis, Willd. ... „ 14
barbata, Willd. ... „ 16
biformis, Willd. ... „ 13
ciliaris, Pers. ... „ 14
ciliaris, ? Wight ... „ 15
commutata, Schult. ... „ 14
commutata, Str. & Wint. „ 15
composita, Willd. ... „ 67
conjugata, Schult. ... „ 12
cruciata, Nees ... „ 14
? *cuspidata*, Schult. ... „ 32
Dactylon, Scop. ... „ 289
debilis, Willd. ... „ 16
didactyla, Willd. ... „ 14

Digitaria Vol. Page
distachya, Bojer ... ... vii. 14
distachya, Pers. ... ... „ 37
elongata, Spreng. ... ... „ 290
elytroblephara, Miq. ... „ 16
eriantha, Steud. ... ... „ 14
eriogona, Link ... ... „ 14
filiformis, Koel. ... ... „ 17
glabra, Beauv. ... ... „ 17
hispidula, Willd. ... ... „ 31
horizontalis, Willd. ... ... „ 14
humifusa, Pers. ... ... „ 17
linearis, Pers. ... ... „ 14
linearis, Rostaf. ... ... „ 17
linearis, Schult. ... ... „ 18
littoralis, Salisb. ... ... „ 289
longiflora, Pers. ... ... „ 18
marginata, Link ... ... „ 14
maritima, Spreng. ... ... „ 289
mauritiana, Wall. ... ... „ 35
nervosa, R. & S. .. ... „ 14
nodosa, Webb & Berth. ... „ 14
procumbens, Hort. ... ... „ 17
pruriens, Büse ... ... „ 14
Pseudo-Duroa, Miq. ... „ 18
puberula, Link ... ... „ 19
radiata, Spreng. ... ... „ 289
radicosa, Miq. ... ... „ 14
repens, Willd. ... ... „ 14
Rottleri, R. & S. ... ... „ 14
Roxburghii, Spreng. ... „ 18
sanguinalis, Scop. ... ... „ 14
sanguinea, Scop. ... ... „ 14
sanguinolenta, Edgew. ... „ 14
setigera, Roth ... ... „ 14
stolonifera, Schrad. ... „ 289
stricta, Roth ... ... „ 59
tenuiflora, Beauv. ... ... „ 18
Digraphis, Trin. ... ... vii. 221
americana, Loud. ... ... „ 221
arundinacea, Trin. ... ... „ 221
Dilivaria ebracteata, Pers. ... iv. 481
ilicifolia, Nees ... ... „ 481
scandens, Nees ... ... „ 481
volubilis, Nees ... ... „ 481
Dillenia, *Linn.* ... ... i. 36
augusta, Roxb. ... ... „ 38
aurea, *Sm.* ... ... „ 37
bracteata, *Wight* ... .. „ 37
dentata, Thunb. ... ... „ 36
elliptica, Thunb. ... ... „ 36
floribunda, *Hk. f. & T.* ... „ 38
grandifolia, *Wall.* ... ... „ 38
indica, *Linn.* ... ... „ 36
integra, Thunb. ... ... „ 37
meliosmæfolia, *Hk. f. & T.* „ 36
ornata, Wall ... ... „ 37
ovata, *Wall.* ... ... „ 36

Dillenia Vol. Page
parviflora, *Griff.* ... ... i. 38
pentagyna, *Roxb.* ... ... „ 38
pilosa, Ham. ... ... „ 38
pilosa, Roxb. ... ... „ 38
pulcherrima, *Kurz* ... ... „ 37
repanda, Roxb. ... ... „ 37
retusa, *Thunb.* ... ... „ 37
scabrella, *Roxb.* ... ... „ 38
speciosa, Griff. ... ... „ 37
speciosa, Thunb. ... ... „ 36
DILLENIACEÆ ... ... i. 30
DILLENIEÆ ... ... i. 31
Dillwynia trifoliata, Roth ... ii. 63
Dilochia Wallichii, Lindl. ... v. 858
Dilochiopsis, Hk. f. .. ... v. 786
Dilophia, *Thoms.* ... ... i. 160
salsa, *Thoms.* ... ... „ 161
Dimeria, *Br.* ... ... vii. 103
alata, *Hk. f.* ... ... „ 105
connivens, *Hack.* ... ... „ 104
? *diandra*, Griff. ... ... „ 104
filiformis, Hochst. ... ... „ 104
fuscescens, *Trin.* ... ... „ 105
gracilis, *Nees* ... ... „ 105
Hohenackeri, *Hochst.* ... „ 103
Kurzii, *Hk. f.* ... ... „ 103
laxiuscula, Thw. ... ... „ 105
Lehmanni, *Hack.* ... ... „ 104
leptorhachis, *Hack.* ... „ 105
ornithopoda, *Trin.* ... ... „ 104
ornithopoda, Thw. ... .. „ 105
pilosissima, Thw. ... ... „ 106
psilobasis, F. Muell. ... „ 104
pubescens, *Hack.* ... ... „ 105
pusilla, *Thw.* ... ... „ 103
pusilla, Thw. ... ... „ 103
stipæformis, Miq. ... ... „ 104
tenera, Trin. ... ... „ 104
? *Thwaitesii*, Hack. ... ... „ 103
Woodrowii, *Stapf* ... ... „ 104
sp., Wall. ... ... vii. 104, 105
Dimocarpus crinita, Lour. ... i. 687
Lichi, Lour. ... ... i. 685, 687
Longan, Lour. ... ... i. 689
pupilla, Moon ... ... „ 689
undulatus, Wight ... ... „ 689
verticillata, Roxb. ... ... „ 684
sp , Wall. ... ... „ 555
Dimorphocalyx, *Thw.* ... ... v. 403
andamanicus, Benth. ... „ 403
capillipes, *Hk. f.* ... ... „ 404
glabellus, *Thw.* ... ... „ 403
glabellus, Bedd. ... ... „ 404
Kunstleri, *King* ... ... „ 405
Lawianus, *Hk. f.* ... ... „ 404
malayanus, *Hk. f.* ... ... „ 404
Dinebra, *Jacq.* ... ... vii. 296

Dinebra Vol. Page
ægyptiaca, Del. ... ... vii. 297
arabica, *Jacq.* ... ... „ 297
retroflexa, Panz. ... ... „ 297
verticillata, Wight ... vii. 297, 327
sp, Wall. ... ... vii. 297
Dinetus paniculatus, Sweet ... ... iv. 222
racemosus, Sweet ... ... „ 222
Dinochloa, *Büse* ... ... vii. 414
andamanica, Kurz ... ... „ 415
M'Clellandi, *Kurz* ... ... „ 415
Tjankorreh, *Büse* ... ... „ 414
Dioclea, *H. B. K.* ... ... ii. 196
Fergusonii, Thw. .. ... „ 196
javanica, Benth. ... ... „ 196
lasiocarpa, Mart. ... ... „ 196
reflexa, *Hk. f.* ... ... „ 196
Dioclea, Spreng. ... ... iv.
hispidissima, Spreng. ... „ 176
Diœcia pentandra, Wall. ... i. 586
Dioscorea, *Linn.* ... ... vi. 288
aculeata, *Linn.* ... ... „ 296
aculeata, Ham. ... ... „ 291
aculeata, Roxb. ... ... „ 291
aculeata, Wight ... ... „ 295
acutangula, Ham. ... ... „ 296
alata, *Linn.* ... ... „ 296
alata, Griseb. ... ... „ 295
altissima, Roxb. ... ... „ 289
amæna, Roxb. ... ... „ 289
angulata, Roxb. ... ... „ 296
anguliflora, Steud. ... ... „ 296
anguina, *Roxb.* ... ... „ 293
atropurpurea, *Roxb.* ... „ 296
Bisantaca, Ham. ... ... „ 296
bulbifera, *Linn.* ... ... „ 296
bulbifera, Br. ... ... „ 295
bulbifera, Russ. ... ... „ 296
Cerubulium, Ham. ... ... „ 291
Cliffortiana, Lam. ... ... „ 295
Collettii, *Hk. f.* ... ... „ 290
coriacea, Wight ... ... „ 292
crepitans, Ham. ... ... „ 294
crispata, *Roxb.* ... ... „ 296
cylindrica, Vitm. ... ... „ 296
cymosula, Hemsl. ... ... „ 291
dæmona, *Roxb.* ... ... „ 289
decemangularis, Ham. ... „ 295
decipiens, *Hk. f.* ... ... „ 293
deflexa, *Hk. f.* ... ... „ 293
deltoidea, *Wall.* ... ... „ 291
Devipata, Ham. ... ... „ 296
digitata, Mill. ... ... „ 289
echinata, Ham. ... ... „ 291
fasciculata, *Roxb.* ... ... „ 296
gibbiflora, *Hk. f* ... ... „ 294
glabra, *Roxb.* ... ... „ 294

Dioscorea Vol. Page
glabra, Wall. ... vi. 292, 293, 294
globosa, *Roxb.* ... ... vi. 296
Hamiltoni, *Hk. f.* ... ... „ 295
heterophylla, Roxb. ... ... „ 295
hirsuta, Dennst. ... ... „ 289
Hurchusia, Ham. ... ... „ 296
incrassata, Ham. ... ... „ 295
intermedia, *Thw.* ... ... „ 297
Jacquemontii, *Hk. f.* ... „ 290
japonica, Hb. Madr. ... „ 296
Kleiniana, Kunth ... ... „ 289
kumaonensis, *Kunth* ... „ 290
lanata, Balf. ... ... „ 291
lanceolata, Heyne ... ... „ 292
laurifolia, *Wall.* ... ... „ 293
lunata, Roth ... ... „ 289
nepalensis, Sweet ... ... „ 297
nummularia, Kunth ... „ 294
nummularia, Lamk. ... „ 294
? *nummularia*, Willd. ... „ 295
obcuneata, *Hk. f.* ... ... „ 293
octangularis, Ham. ... ... „ 296
odoratissima, Wall. ... ... „ 296
oppositifolia, *Linn.* ... „ 292
orbiculata, *Hook.* ... ... „ 292
ovata, Ham. ... ... „ 295
peltata, Juss. ... ... „ 297
pentaphylla, *Linn.* ... ... „ 289
pentaphylla, Wall. ... ... „ 290
polyclades, *Hk. f.* ... ... „ 294
pulchella, Roxb. ... ... „ 295
purpurea, *Roxb.* ... ... „ 297
pyrifolia, *Kunth* ... ... „ 292
rubella, *Roxb.* ... ... „ 297
sagittata, Royle... ... ... „ 294
sativa, *Linn.* ... ... „ 295
sativa, Hb. Madr. ... ... „ 295
sativa, Linn. ... i. 597, vi. 291
sativa, Wall. ... ... vi. 292, 295
spicata, *Roth* ... ... vi. 291, 297
spinosa, *Roxb.* ... ... vi. 291
spinosa, Wall. ... ... „ 294
tiliæfolia, Kunth ... ... „ 291
tomentosa, *Heyne* ... ... „ 289
trinervia, Roxb. ... vi. 289, 292
triphylla, Ham. ... ... vi. 289
triphylla, Linn. ... ... „ 289
triphylla, Russ. ... ... „ 289
triphylla, Wall. ... ... „ 290
Tunga, Ham. ... ... „ 295
versicolor, Ham. ... ... „ 295
virosa, Wall. ... ... „ 289
Wallichii, *Hk. f.* ... ... „ 295
Wightii, *Hk. f.* ... ... „ 291
DIOSCOREACEÆ ... ... vi. 288
Diospermum Metzianum, Sch., vide *Oiospermum* iii. 228

Diospermum Vol. Page
molle, Deless, vide *Decaneuron* ... iii. 227
Diospyros, *Linn.* ... iii. 553
? *acuminata*, Wall. ... v. 172
acuta, *Thw.* ... iii. 561
affinis, *Thw.* ... „ 566
affinis, Hiern ... „ 567
amœna, Wall. ... „ 562
apiculata, *Hiern* ... „ 553
argentea, *Griff.* ... „ 569
Arnottiana, Miq. ... iii. 560, 566
assimilis, *Bedd.* ... iii. 558
attenuata, *Thw.* ... „ 561
bracteata, Roxb. ... „ 555
Brandisiana, *Kurz* ... „ 570
burmanica, *Kurz* ... „ 565
buxifolia, Hiern ... „ 559
calycina, Bedd. ... „ 557
canarica, Bedd. ... „ 566
Candolleana, *Wight* ... „ 566
Candolleana, Miq. ... „ 560
Candolleana, Thw. ... „ 566
capitulata, Wight ... „ 560
cerasifolia, D. Don ... i. 285
chartacea, *Wall.* ... iii. 571
chinensis, Bl. ... „ 555
Chloroxylon, *Roxb.* ... „ 560
clavigera, *Clarke* ... „ 558
cordifolia, Roxb. ... „ 555
costata, Carr. ... „ 555
crumenata, *Thw.* ... „ 567
dasyphylla, *Kurz* ... „ 554
decipiens, *Clarke* ... „ 563
densiflora, *Wall.* ... „ 570
discolor, Willd. ... „ 569
dubia, Wall. ... „ 564
Ebenaster, Roxb. ... „ 558
Ebenum, *Kœnig* ... „ 558
Ebenum, Hiern. ... „ 558
ehretioides, *Wall.* ... „ 559
elegans, *Clarke* ... „ 571
Embryopteris, *Pers.* ... „ 556
exsculpta, Bedd. ... „ 564
exsculpta, Dalz. & Gibs. ... „ 563
exsculpta, Ham. ... „ 564
flavicans, *Hiern* ... „ 562
flavicans, Hiern ... „ 563
foliolosa, *Wall.* ... „ 556
? *frondosa*, Wall. ... i. 92
frutescens, Hassk. ... iii. 570
Gardneri, *Thw.* ... „ 561
glauca, Rottl. ... „ 560
glutinosa, Koen. ... „ 556
Goindu, Dalz. ... „ 555
grata, *Wall.* ... „ 571
Helferi, *Clarke* ... „ 569
heterophylla, Wall. ... „ 555

Diospyros Vol. Page
hirsuta, *Linn. f.* ... iii. 565
hirsuta, Hiern ... „ 566
Horsfieldii, *Hiern* ... „ 570
insculpta, Ham. ... „ 564
insignis, *Thw.* ... „ 565
Kaki, *Linn.* ... „ 555
Kurzii, *Hiern* ... „ 559
lanceæfolia, *Roxb.* ... iii. 562, 571
lanceolata, Wall. ... iii. 556
Lotus, *Linn.* ... „ 555
lucida, *Wall.* ... „ 568
lucida, Hiern ... „ 565
macrophylla, Wall. ... „ 568
martabanica, *Clarke* ... „ 554
melanoxylon, *Roxb.* ... „ 564
melanoxylon, Hiern ... „ 563
microphylla, *Bedd.* ... „ 559
montana, *Roxb.* ... iii. 555, 571
Moonii, *Thw.* ... iii. 566
? *Moonii*, Hiern ... , 569
multiflora, Wall. ... „ 562
nigricans, *Wall.* ... „ 557
nigricans, Dalz. ... „ 558
nilagirica, *Bedd.* ... „ 566
oblonga, *Wall.* ... „ 569
obovata, Wight ... „ 540
oleifolia, *Wall.* ... „ 567
oligandra, Bedd. ... „ 566
oocarpa, *Thw.* ... „ 560
opaca, *Clarke* ... „ 567
oppositifolia, *Thw.* ... „ 565
orixensis, *Wight* ... „ 571
ovalifolia, *Wight* ... „ 557
pachyphylla, *Clarke* ... „ 568
Packmanni, *Clarke* ... „ 564
paniculata, *Dalz.* ... „ 570
pilosula, *Wall.* ... „ 554
pilosula, Kurz ... „ 554
pruriens, *Dalz.* ... „ 553
punctata, Done. ... „ 555
pyrrhocarpa, *Miq.* ... „ 571
quæsita, *Thw.* ... „ 560
racemosa, Roxb. ... „ 556
ramiflora, *Roxb.* ... „ 569
Roxburghii, Carr. ... „ 555
Roylei, Wall. ... „ 572
rubiginosa, Roth ... „ 563
rugosula, Br. ... „ 555
sapotoides, *Kurz* ... „ 562
Schi-Tse, Bunge ... „ 555
serrata, Ham. ... i. 285
stricta, *Roxb.* ... iii. 563, 571
stricta, Hiern ... iii. 571
sylvatica, *Roxb.* ... „ 559
sylvatica, Wall. ... „ 555
Thwaitesii, *Bedd.* ... „ 566
tomentosa, *Roxb.* ... „ 564

Diospyros Vol. Page
tomentosa, Lamk. ... ... iii. 560
Toposia, *Ham.* ... ... „ 556
Tupru, *Ham.* ... ... „ 563
undulata, *Wall.* ... ... „ 568
undulata, Hiern ... ... „ 568
vaccinioides, Wall. ... ... „ 559
variegata, *Kurz* ... ... „ 557
venosa, *Wall.* ... ... „ 572
Waldemarii, Klotz. ... ... „ 555
Wightiana, Wall. ... ... „ 564
sp., Griff. ... ... „ 568
Diotacanthus, *Benth.* ... ... iv. 515
albiflorus, *Benth.* ... ... „ 515
grandis, *Benth.* ... ... „ 515
Dipcadi, *Medic.* ... ... vi. 345
concanense, *Dalz.* ... ... „ 346
hydsuricum, *Baker* ... ... „ 347
minor, *Hk. f.* ... ... „ 346
montanum, *Baker* ... ... „ 346
serotinum, *Medic.* ... ... „ 346
unicolor, *Baker* ... ... „ 346
Diperium cylindricum, Desv. vii. 158
Dipetalum biloculare, Dalz. i. 497
Diphyes capitata, Bl. ... ... v. 759
Diphylax urceolata, Hk. f. ... vi. 165
Diplachne, *Beauv.* ... ... vii. 328
elongata, Hochst. ... ... „ 316
fusca, *Beauv.* ... ... „ 329
Gatacrei, Stapf ... ... „ 329
indica, Spreng. ... ... „ 329
poæformis, Hochst. ... ... „ 316
Diplacrum caricinum, Br. ... vi. 688
tridentatum, Brong. ... „ 688
zeylanicum, Nees ... ... „ 688
Diplanthera, *R. Br.* ... ... iv. 385
bancana, *Scheff.* ... ... „ 385
Diplanthera, Thou. ... ... vi. 570
tridentata, Steinh. ... ... „ 570
sp., Griff. ... ... v. 663
Diplarche, *Hk. f. & T.* ... iii. 462
multiflora, *Hk. f. & T.* ... „ 462
pauciflora, *Hk. f. & T.* ... „ 462
Diplasanthera lanosum, Desv. vii. 196
Diplocentrum, *Lindl.* ... ... vi. 78
congestum, *Wight* ... ... „ 78
longifolium, Wight ... ... „ 78
recurvum, *Lindl.* ... ... „ 78
Diplochilos hirsutum, Lindl. vi. 167
longifolium, Lindl. ... ... „ 167
Diplochlamys Griffithianus, Muell. ... ... v. 433
Diplochonium sesuvioides, Fenzl ... ... ii. 661
Diploclinium Arnottianum, Wight ... ... ii. 641
biloculare, Wight ... ... „ 650
cordifolium, Wight ... ... „ 641

Diploclinium Vol. Page
Lindleyanum, Wight ... ii. 643
Roxburghii, Miq. ... ... „ 635
Diploclisia inclyta, Miers ... i. 101
lepida, Miers ... ... „ 101
macrocarpa, Miers ... ... „ 101
pictinervis, Miers ... ... „ 101
Diplocos zeylanica, Bureau ... v. 488
Diplodon, vide *Dichodon* ... i. 227
Diplomeris, *D. Don* ... ... vi. 166
hirsuta, *Lindl.* ... ... „ 167
pulchella, *D. Don* ... ... „ 167
Diplomorpha canescens, C. A. Mey. ... ... v. 195
herbacea, Griff. ... ... „ 285
virgata, C. A. Mey. ... ... „ 195
? *viridiflora*, C. A. Mey. ... „ 195
Diplopappus asperrimus, DC. iii. 252
asperulus, DC. ... ... „ 253
diplostephioides, Hk. f. & T. „ 251
elegans, Hk. f. & T. ... ... „ 250
laxus, Benth. ... ... „ 252
molliusculus, Lindl. ... „ 251
Roylei, DC. ... ... „ 256
Diplopenta pedunculosa, Alef. i. 332
Diplophyllum cardiocarpum, Kar. & Kir. ... ... iv. 295
Diploprora, *Hk. f.* ... vi. 26, 178
Championi, *Hk. f.* ... ... vi. 26
Diplosiphon oryzetorum, Dcne. v. 661
Diplospora, *DC.* ... ... iii. 122
apiocarpa, *Hk. f.* ... ... „ 123
confusa, *Hk. f.* ... ... „ 124
Dalzellii, *Hk. f.* ... ... „ 123
erythrospora, *Bedd.* ... „ 124
Griffithii, *Hk. f.* ... ... „ 124
Kurzii, *Hk. f.* ... ... „ 125
malaccensis, *Hk. f.* ... ... „ 124
pubescens, *Hk. f.* ... ... „ 124
singularis, *Korth.* ... ... „ 123
singularis, Kurz ... ... „ 124
sphærocarpa, *Hk. f.* ... ... „ 123
Diplostemon octandrum, Miq. ii. 571
Diplotaxis, *DC.* ... ... i. 157
acris, Boiss. ... ... „ 157
Griffithii, *Hk. f. & T.* ... „ 157
grandiflora, Wall. ... ... „ 552
DIPLOZYGIÆ ... ... ii. 667
Diplycosia, *Bl.* ... ... iii. 458
discolor, *Clarke* ... ... „ 459
microphylla, *Becc.* ... ... „ 458
? semi-infera, *Clarke* ... „ 459
Dipodium, *Br.* ... ... vi. 19
flavum, Ham. ... . „ 7
khasianum, Griff. ... ... v. 770
paludosum, *Rchb. f.* ... vi. 19
pictum, *Rchb. f.* ... ... „ 19
plicatum, Ham. ... .. „ 6

Dipodium Vol. Page
ramentaceum, Ham. vi. 4
Roniata, Ham. ,, 6
scariosum, Ham. ,, 3
sp., Griff. v. 769, 770, vi. 195
DIPSACEÆ iii. 215
Dipsacus, *Linn.* iii. 217
asper, *Wall.* ,, 218
atratus, *Hk. f. & T.* ,, 218
auriculatus, Royle ,, 218
inermis, *Wall.* ,, 217
inermis, Wall. ,, 218
Leschenaultii, *Coult.* ,, 218
Leschenaultii, Thw. ,, 218
longicaulis, *Wall.* ,, 217
mitis, D. Don ,, 217
pilosus, Linn. ,, 217
Roylei, Klotz. ,, 217
strictus, *D. Don* ,, 217
strictus, Kurz ,, 217
Walkeri, *Arn.* ,, 218
Dipseudochorion sagittifolium, Buchen. vi. 560
Dipteracanthus ? calycinus, Champ. iv. 468
ciliatus, Nees ,, 408
ciliatus, Wall. ,, 413
dejectus, Nees ,, 412
erectus, Nees ,, 412
lanceolatus, Nees ,, 412
longifolius, Stocks ,, 412
Nagchana, Nees ,, 410
patulus, Nees ,, 412
prostratus, Griff. ,, 412
prostratus, Nees ,, 412
Sibua, Nees ,, 413
urophyllus, Nees ,, 472
vagans, T. Anders. ,, 411
sp., Hk. f. & T. ,, 411
DIPTEROCARPEÆ i. 294
Dipterocarpus, *Gærtn. f.* i. 295
alatus, *Roxb.* ,, 298
alatus, A. DC. ,, 297
angustifolius, W. & A. ,, 299
Baudii, Korth. ,, 296
cordatus, Wall. ,, 297
cornutus, *Dyer* i. 296, ii. 312
costatus, Gærtn. f. i. 298
costatus, Roxb. ,, 299
crinitus, *Dyer* ,, 296
glandulosus, *Thw.* ,, 297
gonopterus, Turcz. ,, 298
grandiflorus, Wall. ,, 297
grandiflorus, Griff. ,, 299
grandifolius, Teysm. ,, 297
Griffithii, *Miq.* ,, 299
hispidus, *Thw.* ,, 296
incanus, *Roxb.* ,, 298

Dipterocarpus Vol. Page
indicus, Bedd. i. 295
insignis, *Thw.* ,, 298
lævis, Ham. ,, 295
Motleyanus, Hk. f. ,, 299
oblongifolius, Thw. ,, 296
oblongus, DC. ,, 296
obtusifolius, *Teysm.* ,, 295
pilosus, *Roxb.* ,, 296
pterygocalyx, *Scheff.* ,, 298
scaber, *Ham.* ,, 297
scabridus, *Thw.* ,, 298
tuberculatus, *Roxb.* ,, 297
turbinatus, *Gærtn. f.* ,, 295
vestitus, *Wall.* ,, 295
zeylanicus, *Thw.* ,, 297
Dipterosperma, sp. Griff. i. 291
Dipterygium, *Dcne.* i. 164
glaucum, *Dcne.* ,, 164
Dischidia, *Br.* iv. 49
acutifolia, *Maing.* ,, 51
albida, *Griff.* ,, 50
? albiflora, Griff. ,, 51
benghalensis, *Coleb.* ,, 50
Brunoniana, Griff. ,, 50
clavata, Wall. ,, 52
coccinea, *Griff.* ,, 51
Collyris, *Wall.* ,, 51
complex, *Griff.* ,, 51
cuneifolia, Wall. ,, 50
fasciculata, Dcne. ,, 50
formosana, Maxim. ,, 50
Griffithii, *Hk. f.* ,, 51
hirsuta, *Dcne.* ,, 50
khasiana, *Hk. f.* ,, 50
Nummularia, *Br.* ,, 49
obovata, Griff. ,, 51
orbicularis, Dcne. ,, 49
Rafflesiana, *Wall.* ,, 50
spathulata, *Bl.* ,, 50
Wallichii, Wight ,, 52
sp., Hk. f. & T. ,, 50
Discopleura, *sp.*, Benth. ii. 693
Discospermum apiocarpum, Bedd. iii. 123
apiocarpum, Dalz. ,, 123
Dalzellii, Thw. ,, 123
erythrospora, Thw. ,, 124
sphærocarpum, Bedd. ,, 123
sphærocarpum, Dalz. ,, 123
Discostigma acuminatum, Planch. & Trian. i. 268
febrile, Miq. ,, 260
merguense, Planch & Trian. ,, 267
rostratum, Hassk. ,, 268
zeylanicum, Planch. & Trian. ,, 268
Disperis, *Sw.* vi. 168, 177

Disperis Vol. Page
neilgherrensis, *Wight* ... vi. 169
tripetaloides, Lindl. ... „ 169
zeylanica, *Trimen* ... ... „ 169
Disporum, *Salisb.* ... ... vi. 359
calcaratum, *D. Don* ... „ 359
ceylanicum, Wight ... ... „ 360
fulvum, D. Don ... ... „ 360
Hamiltonianum, D. Don ... „ 359
Horsfieldii, D. Don ... „ 360
latipetalum, Coll. & Hemsl. „ 359
Leschenaultianum, *D. Don* „ 360
multiflorum, D. Don ... „ 360
mysorense, Wight ... ... „ 360
parviflorum, D. Don ... ... „ 360
Pitsutum, D. Don ... ... „ 360
pullum, *Salisb.* ... ... „ 360
uniflorum, Baker ... ... „ 360
Wallichii, D. Don & Kunth „ 359
Dissochæta, *Bl.* ... ... ii. 543
anceps, Naud. ... ... „ 546
annulata, *Hk. f.* ... ... „ 543
astrosticta, Miq. ... ... „ 544
bancana, Miq. ... ... „ 544
bracteata, *Bl.* ... ... „ 543
bracteosa, Naud. ... ... „ 543
celebica, *Bl.* ... ... „ 544
glauca, Bl. ... ... „ 546
gracilis, *Bl.* ... ... „ 544
intermedia, *Bl.* ... ... „ 544
microcarpa, Naud. ... ... „ 544
ovalifolia, Naud. ... ... „ 544
palembanica, Miq. ... ... „ 546
pallida, *Bl.* ... ... „ 544
punctulata, *Hk. f.* ... ... „ 543
spoliata, Naud. ... ... „ 545
superba, Naud. ... ... „ 544
Dissotis Finlaysonii, Triana ii. 525
Distemon, *Wedd.* ... ... v. 588
grossum, Wedd. ... ... „ 588
indicum, *Wedd.* ... ... „ 588
Distemon, Ehrenb. ... ... iv.
angustifolius, Ehrb. & Hempr. ... ... iv. 250
glandulosus, Ehrb. & Hempr. „ 249
Distylium, *Sieb. & Zucc.* ... ii. 426
indicum, *Benth.* ... ... „ 427
racemosum, Sieb. & Zucc. „ 427
Dithyrocarpus Meyenianus, Kunth ... ... vi. 390
paniculatus, Kunth ... ... „ 390
petiolatus, Wight ... ... „ 390
Rothii, Wight ... ... „ 390
rufus, Kunth ... ... „ 390
undulatus, Wight ... ... „ 390
Dittelasma, *Hk. f.* ... ... i. 671
Rarak, *Hk. f.* ... ... i. 672, 685
Dittoceras, *Hk. f.* ... ... iv. 48
Dittoceras Vol. Page
Andersoni, *Hk. f.* ... ... iv. 48
Diuroglossum rufescens, Turcz. i. 375
Diurospermum album, Edgew. iv. 334
Dobera, *Juss.* ... ... iii. 618
coriacea, A. DC. ... ... „ 619
glabra, A. DC. ... ... „ 619
Roxburghii, *Planch.* ... „ 619
Dobinea, *Ham.* ... ... i. 696
vulgaris, *Ham.* ... ... „ 696
Dochafa flava, Schott ... ... vi. 503
Docynia, *Dcne.* ... ... ii. 369
Griffithiana, Dcne. ... ... „ 369
Hookeriana, *Dcne.* ... ... „ 369
indica, *Dcne.* ... ... „ 369
Dodartea indica, Linn. ... iv. 262
Dodecadenia, *Nees* ... ... v. 180
grandiflora, *Nees* ... ... „ 181
Griffithii, *Hk. f.* ... ... „ 181
? paniculata, *Hk. f.* ... „ 181
paniculata, Meissn. ... ... „ 170
sp., Hk. f. & T. ... ... „ 169
Dodonæa, *Linn.* ... ... i. 697
angustifolia, Linn. f. ... „ 697
arabica, Hochst. & Steud. „ 697
Burmanniana, DC. ... ... „ 697
dioica, Roxb. ... ... „ 697
heterophylla, Hort. ... ... „ 697
microcarpa, DC. ... ... „ 697
pallida, Miq. ... ... „ 697
pentandra, Griff. ... ... „ 697
spathulata, Sm. ... ... „ 697
viscosa, *Linn.* ... ... „ 697
Wightiana, Bl. ... ... „ 697
sp., Hohen. ... ... „ 697
DODONÆEÆ ... ... i. 669
Dolichandrone, *Seem.* ... iv. 378
arcuata, *Clarke* ... ... „ 380
crispa, *Seem.* ... ... „ 379
falcata, *Seem.* ... ... „ 380
Lawii, *Seem.* ... ... „ 380
Rheedii, *Seem.* ... ... „ 379
serrulata, Seem. ... ... „ 380
stipulata, *Benth.* ... ... „ 379
Dolichos, *Linn.* ... ... ii. 209
barbatus, Wall. ... ... „ 216
benghalensis, Jacq. ... ... „ 209
biflorus, *Linn.* ... ... „ 210
blandus, Grah. ... ... „ 213
bracteatus, *Baker* ... ... „ 210
bracteatus, Wall. ... ... „ 225
bulbosus, Linn. ... ... „ 207
candicans, Wall. ... ... „ 226
Catiang, Linn. ... ... „ 205
ciliatus, *Klein* ... ... „ 210
conspersus, Grah. ... ... „ 218
coriaceus, Grah. ... ... „ 196
crassus, Grah. ... ... „ 213

Dolichos Vol. Page
Curtisii, G. Don ... ii. 209
cuspidatus, Grah. ... „ 209
dasycarpus, Miq. ... „ 207
dissectus, Lam. ... „ 202
elongatus, Grah. ... „ 215
ensiformis, Linn. ... „ 195
fabæformis, L'Herit. ... „ 92
falcatus, *Klein* ... „ 211
fatmensis, Hochst. & Steud. „ 224
festivus, Wall. ... „ 209
ficifolius, Grah. ... „ 199
Finlaysonianus, Grah. ... „ 218
gangeticus, Roxb. ... „ 205
giganteus, Willd. ... „ 186
gladiatus, Jacq. ... „ 196
glutinosus, Roxb. ... „ 225
grandifolius, Grah. ... „ 198
Lablab, *Linn* ... „ 209
lanceolatus, *Grah.* ... „ 210
lignosus, *Linn.* ... „ 209
luteolus, Jacq. ... „ 205
luteus, Sw. ... „ 205
macrodon, Grah. ... „ 225
medicagineus, Lam. ... „ 223
medicagineus, Roxb. ... „ 216
minimus, Linn. ... „ 223
monachalis, Brot. ... „ 205
obcordatus, Roxb. ... „ 196
ornatus, Wall. ... „ 216
ovatus, Grah. ... „ 211
phaseoloides, Roxb. ... „ 199
pilosus, Roxb. ... „ 207
prostratus, Kœn. ... „ 210
pruriens, Linn. ... „ 187
psoraloides, Lamk. ... „ 92
punctatus, W. & A. ... „ 218
purpureus, Linn. ... „ 209
reticulatus, Ham. ... „ 213
rhynchosioides, Miq. ... „ 218
rotundifolius, Roxb. ... „ 196
rufescens, Grah. ... „ 221
scarabæoides, Linn. ... „ 215
scarabæoides, Roxb. ... „ 216
sinensis, Linn. ... „ 205
Soja, Linn. ... „ 184
spicatus, Wall. ... ii. 198, 199
subæqualis, *Grah.* ... ii. 211
subcarnosus, *W. & A.* ... „ 211
suffultus, Grah. ... „ 212
tetragonolobus, Linn. ... „ 211
tomentosus, Roth ... „ 225
tranquebaricus, Jacq. ... „ 205
trilobatus, Linn. ... „ 202
trilobatus, Wall. ... „ 211
truncatus, Miq. ... „ 218
uniflorus, Lam. ... „ 210
vestitus, Grah. ... „ 230

Dolichos Vol. Page
viridis, Ham. ... ii. 199
virosus, Roxb. ... „ 196
Dollinera, Endl. ... ii. 166
Dolomiæa macrocephala, DC. iii. 378
Dombeya phœnicea, Cav. ... i. 371
DOMBEYEÆ ... i. 353
Donacodes, Bl. ... vi. 236
Donax arundinaceus, Beauv. vii. 303
benghalensis, Beauv. ... vii. 303
bifarius, Trin. ... „ 303
Thouarii, Beauv. ... „ 305
Donax, Lour. ... vi.
Arundinastrum, Lour. ... „ 258
Dondisia horrida, Korth. ... iii. 135
Leschenaultii, DC. ... „ 135
Doodia alopecuroides, Roxb. ii. 156
crinita, Roxb. ... „ 155
hamosa, Roxb. ... „ 156
lagopodioides, Roxb. ... „ 156
picta, Roxb. ... „ 155
Doona, *Thw.* ... i. 311
affinis, *Thw.* ... „ 311
congestiflora, *Thw.* ... „ 312
cordifolia, *Thw.* ... „ 312
Gardneri, *Thw.* ... „ 312
macrophylla, *Thw.* ... „ 312
nervosa, *Thw.* ... „ 311
ovalifolia, *Thw.* ... „ 312
trapezifolia, *Thw.* ... „ 311
venulosa, *Thw.* ... „ 313
zeylanica, *Thw.* ... „ 311
Dopatrium, *Ham.* ... iv. 273
junceum, *Ham.* ... „ 274
lobelioides, *Benth.* ... „ 274
nudicaule, *Ham.* ... „ 274
Doratanthera linearis, Benth. iv. 250
Dorema, sp., Hk. f. & T. ... ii. 708
Doritis, *Lindl.* ... vi. 31, 178
Braceana, *Hk. f.* ... vi. 196
pulcherrima, Lindl. ... „ 31
tænialis, *Benth.* ... vi. 31, 196
Wightii, *Benth.* ... vi. 32, 196
Doronicum, *Linn.* ... iii. 332
Arnottii, DC. ... „ 344
calcaratum, Roxb. ... „ 297
Candolleanum, W. & A. „ 345
Falconeri, *Clarke* ... „ 333
Gardneri, Clarke ... „ 343
hewrense, Dalz. ... „ 346
Hookeri, *Clarke* ... „ 332
Lessingianum, W. & A. ... „ 345
linifolium, DC. ... „ 343
Pardalianches, Linn. ... „ 332
? *reticulatum*, Dalz. & Gibs. „ 348
reticulatum, Wight ... „ 347
Roylei, *DC.* ... „ 332
rupestre, Wight ... „ 345

Doronicum Vol. Page
scorpioides, Clarke ... iii. 332, 333
tenuifolium, Wight ... ... iii. 346
tomentosum, Wight ... ... ,, 346
Walkeri, Arn. ... ... ,, 345
Wightii, DC. ... ... ,, 344
Dorstenia, *Linn.* ... ... v. 494
Griffithiana, Kurz ... ... ,, 547
indica, *Wall.* ... ... ,, 494
Doryctandra, Hassk. ... ... i. 186
Roxburghii, Hassk. ... ... ,, 186
Dossinia, *Morr.* ... ... vi. 102
lanceolata, Lindl. ... ... ,, 109
marmorata, Lindl. ... ... ,, 96
Douepia tortuosa, Camb. ... i. 158
Doxomma acuminatum, Miers ii. 509
angustatum, Miers ... ... ,, 509
cylindrostachyum, Miers... ,, 509
macrostachyum, Miers ... ,, 509
magnificum, Miers ... ... ,, 509
pendulum, Miers ... ... ,, 509
rigidum, Miers ii. 510, iii. 581
sarcostachys, Miers ... ... ii. 509
Draba, *Linn.* ... ... i. 141
Adamsii, Ledeb. ... ... ,, 142
algida, Adams ... ... ,, 142
alpicola, Klotz. ... ... ,, 142
alpina, *Linn.* ... ... ,, 142
altaica, Bunge ... ... ,, 143
androsacea, Willd. ... ... ,, 143
confusa, Ehrh. ... ... ,, 143
elata, *Hk. f. & T.* ... ... ,, 142
elegans, Boiss. ... ... ,, 142
ellipsoidea, *Hk. f. & T.* ... ,, 144
fladnizensis, *Wulf.* ... ... ,, 143
glacialis, *Adams* ... ... ,, 142
glomerata, Royle ... ... ,, 143
gracilis, Ledeb. ... ... ,, 143
gracillima, *Hk. f. & T.* ... ,, 144
helvetica, Schleich. ... ... ,, 143
himalayensis, Klotz. ... ,, 143
incana, *Linn.* ... ... ,, 143
incompta, *Stev.* ... ... ,, 142
lactea, Kar. & Kir. ... ... ,, 143
lapponica, Wahl. ... ... ,, 143
lasiophylla, *Royle* ... ... ,, 143
linearis, *Boiss.* ... ... ,, 144
muralis, *Linn.* ... ... ,, 144
ochroleuca, Bunge ... ... ,, 142
polytricha, Ledeb. ... ... ,, 142
pygmea, Turcz. ... ... ,, 143
radicans, Royle ... ... ,, 142
setosa, Royle ... ... ,, 142
siliquosa, Bieb. ... ... ,, 143
stellata, Jacq. ... ... ,, 143
stenocarpa, Hk. f. & T. ... ,, 144
tibetica, *Hk. f. & T.* i. 142, 143
verna, Linn. ... ... i. 145
Draba Vol. Page
Wahlenbergii, Hartm. ... i. 143
Dracæna, *Linn.* ... ... vi. 327
angustifolia, *Roxb.* ... ... ,, 327
atro-purpurea, Roxb. ... ,, 330
aurantiaca, *Wall.* ... ... ,, 329
brachyphylla, *Kurz* ... ... ,, 328
brachystachys, *Hk. f.* ... ,, 328
Cantleyi, *Baker* ... ... ,, 331
elliptica, *Thunb.* ... ... ,, 330
elliptica, Thunb. & Dallm. ,, 329
ensifolia, Wall. ... ... ,, 327
ferrea, Linn. ... ... ,, 331
Finlaysoni, Baker ... ... ,, 327
gracilis, *Wall.* ... ... ,, 330
graminifolia, *Wall.* ... ... ,, 327
granulata, *Hk. f.* ... ... ,, 327
Griffithii, Regel ... ... ,, 330
Helferiana, *Wall.* ... ... ,, 330
Heyneana, Wall. ... ... ,, 329
Jackiana, Wall. ... ... ,, 331
javanica, Kunth ... ... ,, 330
linearifolia, Kurz ... ... ,, 331
maculata, Planch. ... ... ,, 330
maculata, Roxb. ... ... ,, 330
maculata, Wall. ... ... ,, 328
Maingayi, *Hk. f.* ... ... ,, 329
? *marmorata*, Baker ... ... ,, 329
pachyphylla, *Kurz* ... ... ,, 329
petiolata, *Hk. f.* ... ... ,, 331
Porteri, *Baker* ... ... ,, 328
spicata, *Roxb.* ... ... ,, 328
spicata, Baker ... ... ,, 328
terminalis, Jack ... ... ,, 331
terminalis, Wight ... ... ,, 329
terniflora, *Roxb.* ... ... ,, 328
terniflora, Wall. ... ... ,, 330
ternifolia, Kurz ... ... ,, 328
Thwaitesii, Regel ... ... ,, 329
Wallichii, Kunth ... vi. 328, 330
DRACÆNEÆ ... ... vi. 300
Dracocephalum, *Linn.* ... iv. 664
acanthoides, Edgew. ... ,, 666
bipinnatum, Rupr. ... ... ,, 666
erectum, Royle ... ... ,, 663
Govanianum, Benth. ... ,, 663
heterophyllum, *Benth.* ... ,, 665
Hookeri, *Clarke* ... ... ,, 666
inderiense, Kar. & Kir. ... ,, 667
moldavicum, *Linn.* ... ... ,, 665
nutans, *Linn.* ... ... ,, 665
pinnatum, Linn. ... ... ,, 660
Royleanum, Benth. ... ... ,, 667
Ruprechtii, *Regel* ... ... ,, 666
speciosum, *Benth.* ... ... ,, 665
stamineum, *Kar. & Kir.* ... ,, 666
Dracontium polyphyllum, Denst. ... ... vi. 514

Vol. Page
Dracontium
spinosum, Linn. ... ... vi. 550
Dracontomelum, *Bl.* ... ... ii. 43
mangiferum, *Bl.* ... ... „ 43
puberulum, Miq. ... ... „ 43
sylvestre, Bl. ... ... „ 43
Drapiezia multiflora, Bl. ... vi. 360
Dregea, *E. Mey.* ... ... iv. 46
volubilis, *Benth.* ... ... „ 46
Drepananthus, *Maing.* ... i. 56
pruniferus, *Maing.* ... ... „ 56
ramuliflorus, *Maing.* ... „ 56
Drimycarpus, *Hk. f.* .. ... ii. 36
racemosus, *Hk. f.* ... ... „ 36
Droguetia, *Gaud.* ... ... v. 593
diffusa, *Wedd.* ... ... „ 593
pauciflora, Wedd. ... ... „ 593
Drosera, *Linn.* ... ... ii. 424
Burmanni, *Vahl* ... ... „ 424
Findlaysoniana, Wall. ... „ 424
foliosa, Hk. f. ... ... „ 424
gracilis, Hk. f. ... ... „ 424
indica, *Linn.* ... ... „ 424
intermedia, Royle ... ... „ 425
intermedia, W. & A. ... „ 425
Lobbiana, Turcz. ... ... „ 424
lunata, Ham. ... ... „ 424
peltata, *Sm.* ... ... „ 424
serpens, Planch. ... ... „ 424
Droseraceæ ... ... ii. 423
Dryadanthe Bungeana, Led. ii. 346
Dryandra oleifera, Wall. ... v. 384
Drymaria, *Willd.* ... ... i. 244
cordata, *Willd.* ... ... „ 244
extensa, Wall. ... ... „ 244
Drymispermum cauliflorum, Thw. ... ... v. 199
Drymoda, *Lindl.* ... ... v. 781
picta, *Lindl.* ... ... „ 781
Drymophlœus singaporensis, Hk. f. ... ... vi. 413
Drypetes bengalensis, Spreng. v. 328
Drypideæ ... ... i. 212
Dryptopetalum coriaceum, Arn. ... ... i. 625, ii. 440
membranaceum, Miq. ... ii. 441
Duabanga, *Ham.* ... ... ii. 578
sonneratioides, *Ham.* ... „ 579
Dubrueilia peploides, Gaud. v. 554
Dubyæa, DC. ... ... iii. 409
hispida, DC. ... ... „ 410
Duchassaingia ovalifolia, Walp ... ... ii. 189
Duchesnea chrysantha, Miq.... ii. 343
fragarioides, Sm. ... ... „ 343
fragiformis, D. Don ... „ 343
sundaica, Miq. ... ... „ 359
Duchesnia crispa, Cass. ... iii. 299

Vol. Page
Duhaldea chinensis, DC. ... iii. 295
Dumasia, *DC.* ... ... ii. 182
congesta, Grah. ... ... „ 183
cordifolia, *Benth.* ... ... „ 183
leiocarpa, Benth. ... ... „ 183
pubescens, DC. ... ... „ 183
villosa, *DC.* ... ... „ 183
Dumreichera, Hochst. ... i. 334
Dunbaria, *W. & A.* ... ... ii. 217
barbata, Benth. ... ... „ 216
calycina, Miq. ... ... „ 216
circinalis, *Baker* ... ... „ 219
conspersa, *Benth.* ... ... „ 218
debilis, *Baker* ... ... „ 218
ferruginea, *W. & A.* ... „ 217
fusca, Kurz ... ... „ 204
Heynei, *W. & A.* ... ... „ 217
Horsfieldii, Miq. ... ... „ 213
latifolia, W. & A. ... ... „ 217
oblonga, Arn. ... ... „ 218
podocarpa, *Kurz* ... ... „ 218
pulchra, *Benth.* ... ... „ 218
Duranta ... ... iv. 560
Durio, *Linn.* ... ... i. 350
malaccensis, *Planch.* ... „ 351
Oxleyanus, *Griff.* ... ... „ 351
zeylanicus, Gardn. ... ... „ 350
zibethinus, *DC.* ... ... „ 351
Duthiea, *Hack.* vii. 282, 362, 421, 422
bromoides, *Hack.* ... vii. 282, 362
oligostachya, Stapf ... ... vii. 283
Dyera, *Hk. f.* ... ... iii. 643
costulata, *Hk. f.* ... ... „ 644
laxiflora, *Hk. f.* ... ... „ 644
Dymczewiezia, Horan. ... vi. 248
capitata, Horan. ... ... „ 249
elata, Horan. ... ... „ 249
marginata, Horan. ... ... „ 249
Dyschoriste cernua, Nees ... iv. 410
depressa, Nees ... ... „ 410
littoralis, Nees ... ... „ 410
Dysodidendron ceylanicum, Gardn. ... ... iii. 193
glomeratum, Gardn. ... „ 192
Wightii, Gardn. ... ... „ 193
Dysophylla, *Bl.* ... ... iv. 637
auricularia, *Bl.* ... ... „ 638
Benthamiana, Hance ... „ 639
crassicaulis, *Benth.* ... ... „ 640
cruciata, *Benth.* ... ... „ 639
erecta, *Dalz.* ... ... „ 641
gracilis, *Dalz.* ... ... „ 641
Griffithii, *Hk. f.* ... ... „ 641
Helferi, *Hk. f.* ... ... „ 640
linearis, *Benth.* ... ... „ 639
linearis, Wall. ... ... „ 639
myosuroides, *Benth.* ... „ 638

	Vol.	Page
Dysophylla		
pentagona, *Clarke*	iv.	641
pumila, Benth.	„	640
quadrifolia, *Benth.*	„	639
ramosissima, Benth.	„	639
rugosa, *Hk. f.*	„	638
rupestris, Dalz.	„	639
salicifolia, *Dalz.*	„	638
stellata, *Benth.*	„	640
Stocksii, *Hk. f.*	„	642
strigosa, Benth.	„	636
tetraphylla, Wight	„	639
tomentosa, *Dalz.*	„	641
velutina, Benth.	„	639
verticillata, *Benth.*	„	639
sp., Griff.	„	639
sp., Hk. f. & T.	„	638
Dysoxylum, *Bl.*	i.	546
Beddomei, *Hiern*	„	548
binectariferum, *Hk. f.*	„	546
brevipes, *Hiern*	„	546
cauliflorum, *Hiern*	„	549
Championii, Hk. f. & T.	„	562
cuneatum, *Hiern*	„	549
flavescens, *Hiern*	„	549
grande, *Hiern*	„	547
grandiflorum, Roem.	„	552
Griffithii, *Hiern*	„	549
Hamiltonii, *Hiern*	„	548
macrocarpum, Thw.	„	546
Maingayi, *Hiern*	„	547
malabaricum, *Bedd.*	„	548
multijugum, Arn.	„	552
pallens, *Hiern*	„	548
paniculatum, Arn.	„	552
procerum, *Hiern*	„	547
thyrsoideum, *Griff.*	„	547
sp., Bedd.	„	548
Ebenacea, sp., Griff.	iii.	562
Ebenacea, Wall.	iv.	183
EBENACEÆ	iii.	549
Ebenus, *Linn.*	ii.	140
ferruginea, J. & Sp.	„	141
horrida, J. & Sp.	„	141
stellata, *Boiss.*	„	140
tragacanthoides, J. & Sp.	„	140
Ebermaiera, *Nees*	iv.	395
angustifolia, *T. Anders.*	„	398
argentea, Nees	„	398
aristata, T. Anders.	„	398
axillaris, *Nees*	„	399
Beddomei, *Clarke*	„	402
coriacea, *T. Anders.*	„	402
diffusa, Kurz	„	397
elongata, *Nees*	„	400
glauca, *Nees*	„	395
glauca, T. Anders.	iv.	396, 397
Ebermaiera		
glutinosa, *Wall.*	iv.	396
gracilis, *T. Anders.*	„	402
Griffithiana, *T. Anders.*	„	400
Helferi, *T. Anders.*	iv.	399, 400
humilis, *Nees*	iv.	396
incana, *Hassk.*	„	397
lanceolata, *Hassk.*	„	397
lasiobotrys, *Nees*	„	400
ligulata, Bedd.	„	395
longifolia, *Nees*	„	399
Maclellandii, *T. Anders.*	„	401
macrophylla, *T. Anders.*	„	400
merguensis, *T. Anders.*	„	402
obtusa, *T. Anders.*	„	401
paniculata, *Wall.*	„	401
parviflora, *T. Anders.*	„	402
polybotrya, *Nees*	„	396
racemosa, *Miq.*	„	401
setigera, *Nees*	„	398
Simonsii, *T. Anders.*	„	399
spatulata, Hassk.	„	396
spatulata, Nees	„	396
Staurogyne, *Nees*	„	398
Staurogyne, T. Anders.	„	398
subpaniculata, Hassk.	„	400
thyrsoidea, *Nees*	„	397
thyrsoidea, Kurz	„	267
trichocephala, Miq.	„	398
velutina, Nees	„	397
zeylanica, *Nees*	„	397
zeylanica, T. Anders.	„	397
sp., Wall.	iv.	396, 400
Ecbolium, *Kurz*	iv.	544
Linneanum, *Kurz*	„	544
Eccoilopus andropogonoides, Steud.	vii.	108
Eccremanthus eximius, Thw.	i.	691
Ecdysanthera, *H. & A.*	iii.	662
barbata, Miq.	„	660
brachiata, A. DC.	„	662
glandulifera, A. DC.	„	660
micrantha, *A. DC.*	„	662
Echaltium piscidium, Wight	iii.	629
Echinacanthus, *Nees*	iv.	414
Andersoni, *Clarke*	„	415
attenuatus, *Nees*	„	414
Brugmansianus, *Nees*	„	415
calycinus, Nees	„	469
longistylus, *Clarke*	„	415
parviflorus, *T. Anders.*	„	415
Pumilio, *Clarke*	„	415
sp., T. Anders.	„	415
Echinalysium articulatum, Trin.	vii.	306
strictum, Trin.	„	306
Echinocalyx, Benth.	ii.	268
Echinocarpus, *Bl.*	i.	399

Echinocarpus Vol. Page
assamicus, *Benth.* ... ... i. 399
dasycarpus, *Benth.* ... ... „ 400
Murex, *Benth.* ... ... „ 399
Sigun, Bl. ... ... „ 399
sterculiaceus, *Benth.* ... „ 400
tomentosus, *Benth.* ... „ 400
Echinocaulos perfoliatus, Hassk. ... ... v. 46
Echinochloa commutata, Schult. ... ... vii. 31
Crus-corvi, Beauv. ... ... „ 31
Crus-galli, Beauv. ... ... „ 31
? *dubia*, R. & S. ... ... „ 31
eruciformis, Rchb. f. ... „ 28
frumentacea, Link ... ... „ 32
glabrescens, Munro ... ... „ 31
? *hirta*, Schult. ... ... vii. 67, 81
hirtella, Schult. ... ... vii. 68
hispida, Schult. ... ... „ 31
hispidula, Nees ... ... „ 31
lanceolata, R. & S. ... ... „ 67
squarrosa, R. & S. ... ... „ 62
stagnina, Beauv. ... ... „ 31
Echinolæna polystachya, H. B. K. ... ... vii. 58
sp., Wall. ... ... „ 58
Echinolytrum dipsaceum, Desv. .. .. vi. 635
Echinops, *Linn.* ... ... iii. 358
coriarius, Clarke ... ... „ 358
cornigerus, *DC.* ... ... „ 358
echinatus, *DC.* ... ... „ 358
? *Griffithianus*, Boiss. ... „ 358
niveus, *Wall.* ... ... „ 359
Echinopsilon divaricatus, Kar. & Kir. ... ... v. 10
sedoides, Moq. ... ... „ 10
tibeticus, Hk. f. & T. ... „ 10
Echinospermum, *Sw.* ... ... iv. 162
barbatum, *Lehm.* ... ... „ 163
canum, Benth. ... ... „ 164
cœlestinum, Wight ... „ 160
glochidiatum, A. DC. ... „ 161
intermedium, Ledeb. ... „ 163
minimum, *Lehm.* ... ... „ 162
? *myosotiflorum*, A. DC. ... „ 164
patulum, Lehm. ... ... „ 163
Redowskii, *Lehm.* ... ... „ 163
semiglabrum, *Ledeb.* ... „ 163
sericeum, Benth. ... ... „ 165
spathulatum, Benth. ... „ 164
zeylanicum, Lehm. ... ... „ 157
sp., Hk. f. & T. ... ... „ 161
Echinus trisulcus, Lour. ... v. 430
Echiochilon hispidissimum, Tausch. ... ... iv. 176
Echioglossum striatum, Rchb. f. vi. 76

Echites acuminata, Roxb. ... iii. 663
affinis, R. & S. ... ... „ 670
antidysenterica, Roxb. ... „ 644
apoxys, Voigt ... ... „ 664
brachiata, Wall. ... ... „ 662
bracteata, Heyne ... ... „ 665
calycina, Wall. ... ... „ 665
caryophyllata, Roxb. „ 665
caryophyllata, Wall. ... „ 664
caudata, Burm. ... ... „ 655
conferta, Wall. ... ... „ 665
coriacea, Heyne ... ... iv. 6
coriacea, Wall. ... ... iii. 668
? *cristata*, Roth ... ... „ 664
cuspidata, Heyne ... ... iv. 5
cymosa, Roxb. ... ... iii. 665
cymosa, Wall. ... ... „ 665
dichotoma, Heyne ... ... iv. 14
dichotoma, Roth ... ... iii. 664
dichotoma, Roxb. ... ... „ 650
elegans, Wall. ... ... „ 665
elliptica, Wall. ... ... „ 667
? *esculenta*, Wall. ... ... „ 658
frutescens, Wall. ... ... „ 669
glandulifera, Wall. ... ... „ 660
grandiflora, Roxb. ... ... „ 660
grandis, Wall. ... ... „ 661
Heynei, Spreng. ... ... „ 664
hircosa, Roxb. ... ... „ 651
lævigata, Wall. ... ... „ 666
? *lucida*, D. Don ... ... „ 658
? *lucida*, Wall. ... ... „ 658
? *macrantha*, Spreng. ... „ 661
macrocarpa, Wall. ... ... „ 663
macrophylla, Roxb. ... ... „ 661
malabarica, Lamk. ... ... „ 662
manubriata, Wall. ... ... „ 668
marginata, Roxb. ... ... „ 663
? *micrantha*, Wall. ... ... „ 662
monilifera, Wall. ... ... „ 660
Pala, Ham. ... ... „ 642
paniculata, Roxb. ... ... „ 668
parviflora, Roxb. ... ... „ 666
pauciflora, Rottl. ... ... iv. 6
polyantha, Wall. ... ... iii. 668
religiosa, Teysm. & Binn. „ 653
reticulata, Boj. ... ... „ 663
reticulata, Roth ... ... iv. 5
rhynchospermum, Wall. ... iii. 667
scholaris, Linn. ... ... „ 642
tomentosa, Roth ... ... „ 662
venenata, Roxb. ... ... „ 642
verticalis, Ham. ... ... „ 667
vestita, R. & S. ... ... „ 662
ECHITIDEÆ ... ... iii. 622, 650
Echium Benthami, Wall. ... iv. 177
Eclipta, *Linn.* ... ... iii. 304

Eclipta Vol. Page
  alba, *Hassk.* ... iii. 304
  alba, Boiss. ... „ 304
  alba, Dalz. & Gibs. ... „ 304
  erecta, Dalz. & Gibs. ... „ 304
  erecta, Lamk. ... „ 304
  erecta, Linn. ... „ 304
  latifolia, Linn. f. ... „ 305
  marginata, Boiss. ... „ 304
  parviflora, Wall. ... „ 305
  prostrata, Linn. ... „ 304
  prostrata, Roxb. ... „ 305
  prostrata, Wall. ... „ 305
  scabriuscula, Wall. ... iii. 306, 307
  undulata, Wall. ... iii. 305
Ecliptacea, Wall. ... iii. 307
Edgaria, *Clarke* ... ii. 631
  darjeelingensis, *Clarke* ... „ 632
Edgeworthia, Falc. ... iii. 534
  buxifolia, Falc. ... „ 534
  sp., Griff. ... „ 534
Edgeworthia, *Meissn.* ... v. 194
  chrysantha, Lindl. ... „ 195
  Gardneri, *Meissn.* ... „ 195
  papyrifera, Zucc. ... „ 195
Edwardsia maderaspatana, Wight ... ii. 249, 251
  mollis, Royle ... ii. 251
Ehretia, *Linn.* ... iv. 141
  acuminata, *Br.* ... „ 141
  affinis, Wall. ... „ 142
  aspera, Roxb. ... „ 142
  buxifolia, *Roxb.* ... „ 144
  canarensis, Miq. ... „ 142
  Championi, Wight & Gardn. „ 142
  cuneata, Wight ... „ 145
  Cutranga, Ham. ... „ 142
  dichotoma, Rottl. ... „ 142
  Dicksoni, Hance ... „ 141
  floribunda, Benth. ... „ 142
  glabra, Roth ... „ 136
  heterophylla, Spreng. ... „ 144
  Heynii, R. & S. ... „ 142
  lævis, *Roxb.* ... „ 141
  lævis, Benth. ... „ 142
  lanceolata, Heyne ... „ 143
  longiflora, Champ. ... „ 144
  macrophylla, *Wall.* ... „ 141
  microphylla, Lamk. ... „ 144
  mollis, Wall. ... „ 144
  obovata, R. Br. ... „ 143
  obtusifolia, *Hochst.* ... „ 142
  ovalifolia, *Wight* ... „ 143
  ovalifolia, Hassk. ... „ 141
  parallela, *Clarke* ... „ 143
  philippensis, A. DC. ... „ 142
  pubescens, Benth. ... „ 142
  punctata, Roth ... „ 142

Ehretia Vol. Page
  pyrifolia, D. Don ... iv. 141
  retusa, *Wall.* ... „ 143
  serrata, Roxb. ... „ 141
  timorensis, Dcne. ... „ 142
  tomentosa, Roth ... „ 142
  umbellulata, Wall. ... i. 604
  viminea, Wall. ... iv. 145
  Wallichiana, *Hk. f. & T.* ... „ 143
  Wightiana, *Wall.* ... „ 143
EHRETIEÆ ... iv. 134
Ekebergia indica, Roxb. ... i. 545
  ? *integerrima*, Wall. ... „ 545
Elachocroton asperococcus, Muell. ... v. 475
ELÆAGNACEÆ ... v. 201
Elæagnus, *Linn.* ... v. 201
  angustifolia, Linn. ... „ 201
  arborea, Roxb. ... „ 202
  armata, Ham. ... „ 202
  conferta, Roxb. ... „ 202
  elliptica, Heyne ... „ 202
  ferruginea, A. Rich. ... „ 202
  hortensis, *M. Bieb.* ... „ 201
  Kologa, Schl. ... „ 202
  latifolia, *Linn.* ... „ 202
  Moorcroftii, Wall. ... „ 201
  orientalis, Linn. ... „ 201
  parvifolia, Wall. ... „ 202
  pyriformis, *Hk. f.* ... „ 202
  reflexa, Dcne. & Morr. ... „ 202
  Simoni, Hort. ... „ 202
  Thwaitesii, Schl. ... „ 202
  umbellata, *Thunb.* ... „ 201
  Wallichiana, Schl. ... „ 202
Elæocarpus, *Linn.* ... i. 400
  Acronodia, *Mast.* ... „ 408
  acuminatus, *Wall.* ... „ 406
  adenophyllus, Wall. ... „ 403
  amœnus, *Thw.* ... „ 404
  amygdalinus, Wall. ... „ 402
  ? *angustifolius*, Wight ... „ 403
  apiculatus, *Mast.* ... „ 407
  aristatus, *Roxb.* ... „ 405
  aristatus, Wall. ... „ 402
  bracteatus, *Kurz* ... „ 406
  ceylanicus, *Arn.* ... „ 406
  Chackroula, Ham. ... „ 408
  copalliferus, Retz. ... „ 313
  coriaceus, Hook. ... „ 404
  cuneatus, *Wight* ... „ 402
  cyanocarpa, *Maing.* ... „ 406
  ferrugineus, *Steud.* ... „ 406
  ? *Finlaysonianus*, Wall. ... „ 407
  floribundus, *Bl.* ... „ 401
  Ganitrus, *Roxb.* ... „ 400
  glabrescens, *Mast.* ... „ 403
  glandulifer, *Mast.* ... „ 406

Elæocarpus Vol. Page
glandulosus, Wall. ... ... i. 403
grandifolius, Kurz ... ... „ 405
Griffithii, *Mast.* ... ... „ 408
grossa, Wall. ... ... „ 401
Helferi, *Kurz* ... ... „ 402
integer, *Wall.* ... ... „ 408
integrifolius, Lamk. ... „ 401
Jackianus, Wall. ... ... „ 409
? *lacunosus*, Wall. ... i. 401, 402
lanceæfolius, *Roxb.* ... ... i. 402
lanceolatus, Wall. ... ... „ 402
leptostachya, *Wall.* ... „ 403
Lobbianus, Turcz. ... ... „ 401
longifolius, Wall. ... ... „ 409
lucidus, *Roxb.* ... ... „ 403
Monocera, *Cav.* ... ... „ 405
monoceroides, *Wight* ... „ 409
montanus, *Thw.* ... ... „ 404
Munroii, *Mast.* ... ... „ 407
nitidus, *Jacq.* ... ... „ 401
oblongus, *Gærtn.* ... ... „ 403
oblongus, Wall. ... i. 401, 402
obovatus, *Arn.* ... ... i. 404
ovalifolius, Wall. ... ... „ 402
paniculatus, *Wall.* ... ... „ 407
parvifolius, *Wall.* ... ... „ 401
pedunculatus, *Wall.* ... „ 408
Perim-Kara, DC. ... ... „ 403
Pirincara, Wall. ... ... „ 401
polystachyus, *Wall.* ... „ 403
prunifolius, *Wall.* ... ... „ 407
pubescens, Hook. ... ... „ 404
punctatus, *Wall.* ... ... „ 405
robustus, *Roxb.* ... ... „ 402
? *robustus*, Wall. ... ... „ 408
rugosus, *Roxb.* ... ... „ 405
rugosus, Wall. ... ... „ 405
serratus, *Linn.* .. .. „ 401
serratus, Heyne ... ... „ 403
serratus, Roxb. ... ... „ 401
serratus, Wall. ... ... „ 402
serrulatus, Roxb. ... ... „ 405
sikkimensis, *Mast.* ... ... „ 402
stipularis, *Bl.* ... ... „ 404
subvillosus, *Arn.* ... ... „ 404
tuberculatus, *Roxb.* ... „ 404
Varunua, *Ham.* ... ... „ 407
? *venustus*, Bedd. ... ... „ 405
Elæodendron, *Jacq. f.* ... i. 623
glaucum, *Pers.* ... ... „ 623
nilghirense, Wall. ... ... „ 614
oxyodon, Turcz. ... ... „ 623
paniculatum, W. & A. ... „ 623
Roxburghii, W. & A. ... „ 623
Elæosticta, *Fenzl* ... ... ii. 673
meifolia, *Fenzl* ... ... „ 673
Elate sylvestris, Linn. ... vi. 425

Vol. Page
Elateriospermum, *Bl.* ... v. 381
Tapos, *Bl.* ... ... „ 382
Elatine, *Linn.* ... ... i. 250
æstivosa, Wight ... ... „ 251
ambigua, *Wight* ... ... „ 251
americana, *Arn.* ... ... „ 250
ammannioides, W. & A. ... „ 251
triandra, Schk. ... ... „ 251
verticillata, W. & A. ... „ 252
ELATINEÆ ... ... i. 250
Elatostema, *Forst.* ... ... v. 562
acuminatum, *Brong.* ... „ 566
affine, Wedd. ... ... „ 564
approximatum, Wedd. ... „ 568
bulbiferum, Kurz ... ... „ 561
ciliatum, *Clarke* ... ... „ 574
Clarkei, *Hk. f.* ... ... „ 569
cornutum, *Wedd.* ... v. 560, 574
cuneatum, *Wight* ... ... v. 568
cuspidatum, Wight ... v. 564, 565
cuspidiferum, Miq. ... ... v. 564
decipiens, *Wedd.* ... ... „ 570
dissectum, *Wedd.* ... ... „ 568
diversifolium, Wedd. ... „ 572
ellipticum, *Wedd.* ... ... „ 574
ficoides, *Wedd.* ... ... „ 563
frutescens, Hassk. ... ... „ 575
gibbosum, Kurz... ... ... „ 560
Griffithii, *Hk. f.* ... ... „ 569
Hookerianum, *Wedd.* ... „ 567
integrifolium, Wedd. ... „ 564
lætum, Wedd. ... ... „ 572
lævigatum, Hassk. ... ... „ 575
lineolatum, *Wight* ... ... „ 565
lineolatum, Hk. f. & T. ... „ 564
Mariannæ, Clarke ... ... „ 563
membranifolium, Kurz ... „ 566
Miquelianum, Wedd. ... „ 564
molle, *Wedd.* ... ... „ 564
nasutum, *Hk. f.* ... ... „ 571
nigrescens, Clarke ... ... „ 571
Novaræ, *Kurz* ... ... „ 574
obtusum, *Wedd.* ... ... „ 573
oppositifolium, Dalz. ... „ 559
ovatum, Wight... ... ... „ 559
papillosum, *Wedd.* ... ... „ 569
platyphyllum, *Wedd.* ... „ 566
polycephalum, Wedd. ... „ 564
procridioides, *Wedd.* ... „ 570
pubescens, Pers. ... ... „ 563
pusillum, *Clarke* ... ... „ 568
reptans, *Hk. f.* ... ... „ 567
rupestre, *Wedd.* ... ... „ 564
serratum, Forst. ... ... „ 563
sesquifolium, *Hassk.* ... „ 564
sessile, *Forst.* ... ... „ 563
sikkimense, *Clarke* ... ... „ 571

Elatostema Vol. Page
stellatum, *Hk. f.* ... ... v. 572
Stracheyanum, *Wedd.* ... „ 567
subincisum, *Wedd.* ... ... „ 566
surculosum, *Wight* ... ... „ 572
Treutleri, *Hk. f.* ... ... „ 571
Walkeræ, *Hk. f.* ... ... „ 566
Webbianum, Wedd. ... ... „ 568
Wightianum, Wedd. ... „ 575
Wightii, *Hk. f.* ... ... „ 570
Zollingerianum, Wedd. ... „ 564
Electra calycina, Panz. ... vii. 336
nitida, Panz. ... ... „ 336
Eleiotis, *DC.* ... ... ii. 153
monophylla, DC. ... ... „ 153
Rottleri, W. & A. ... ... „ 174
sororia, *DC.* ... ... „ 153
Eleocharis, *R. Br.* ... ... vi. 625
acicularis, *Br.* ... ... „ 628
acutangula, Schult. ... ... „ 627
afflata, *Steud.* ... ... „ 629
alta, Boeck. ... ... „ 630
atropurpurea, *Kunth* ... „ 627
atropurpurea, Boeck. ... „ 627
cæspitosissima, Baker ... „ 629
capitata, *Br.* ... ... „ 627
capitata, Boeck. ... ... „ 628
Chætaria, *R. & S.* ... ... „ 629
Chætaria, Boeck. ... ... „ 629
chlorocarpa, Boeck. ... „ 629
? *confervoides*, Miq. ... ... „ 654
congesta, *D. Don* ... ... „ 630
equisetina, *Presl* ... ... „ 626
erythrochlamys, Miq. ... „ 630
fistulosa, *Schult.* ... ... „ 626
fistulosa, Boeck. ... ... „ 629
incurvata, Schult. ... ... „ 656
interstincta, Br. ... ... „ 626
juncoides, Schult. ... ... „ 656
Kuntzei, Boeck. ... ... „ 630
media, Schult. ... ... „ 627
ochrostachys, *Steud.* ... „ 626
ochrostachys, Boeck. ... „ 629
ovata, *Br.* ... ... „ 628
ovata, Boeck. ... ... „ 628
ovata, Thw. ... ... „ 630
palustris, *Br.* ... ... „ 628
palustris, Boiss. ... ... „ 628
palustris, Strach. ... ... „ 630
planiculmis, Steud. ... „ 627
plantaginea, *Br.* ... ... „ 625
plantaginea, Boeck. ... „ 626
purpurascens, Boeck. ... „ 630
setacea, Br. ... ... „ 629
spiralis, *Br.* ... ... „ 627
subprolifera, Boeck ... „ 629
subprolifera, Steud. ... „ 629
subulata, Boeck. ... ... „ 626
Eleocharis Vol. Page
subvivipara, *Boeck.* ... vi. 629
tetraquetra, *Nees* ... ... „ 630
tetraquetra, Boeck. ... ... „ 630
Thomsoni, Boeck. ... ... „ 629
tumida, R. & S. ... ... „ 625
uniglumis, Nees ... ... „ 628
variegata, *Kunth* ... ... „ 626
variegata, Boeck. ... ... „ 626
Wichurai, Boeck. ... ... „ 630
sp., *Hk. f. & T.* ... ... „ 630
sp., Wall. ... vi. 626, 627, 628, 630
Eleogenus, Nees ... ... vi. 627
atropurpureus, Nees ... „ 627
capitatus, Nees ... ... „ 628
ovatus, Nees ... ... „ 628
Eleogiton curvulus, Nees ... vi. 653
fluitans, Link ... ... „ 653
monostachya, Dietr. ... „ 634
scabra, Dietr. ... ... „ 631
Elephantopus, *Linn.* ... ... iii. 242
scaber, *Linn.* ... ... „ 242
Elettaria, *Maton* ... ... vi. 251
cannæcarpa, Wight ... ... „ 240
Cardamomum, *Maton* ... „ 251
costata, Horan. ... ... „ 235
floribunda, Thw. ... ... „ 233
involucrata, Thw. ... ... „ 233
linguiformis, Schult. ... „ 235
major, Sm. ... ... „ 251
media, Link ... ... „ 235
nemoralis, Thw. ... ... „ 233
rufescens, Thw. ... ... „ 242
Elettariopsis, *Baker* ... ... vi. 251
Curtisii, *Baker* ... ... „ 252
exserta, *Baker* ... ... „ 251
serpentina, *Baker* ... ... „ 252
Eleusine, *Gærtn.* ... ... vii. 293
ægyptiaca, *Desf.* ... ... „ 295
arabica, Hochst. ... ... „ 294
aristata, *Ehrenb.* ... ... „ 296
brevifolia, *Br.* ... ... „ 294
calycina, Ham. ... ... „ 306
calycina, Roxb. ... ... „ 297
cerealis, Salisb. ... ... „ 294
chinensis, Duthie ... ... „ 298
ciliata, Rafin. ... ... „ 295
coracana, *Gærtn.* ... ... „ 294
cruciata, Lamk. ... ... „ 295
decipiens, Steud. ... ... „ 299
distachya, Trin. ... ... „ 293
distans, Moench ... ... „ 294
domingensis, Sieb. ... ... „ 294
dura, Lamk. ... ... „ 335
? *filiformis*, Pers. ... ... „ 298
flagellifera, *Nees* ... ... „ 294
glaucophylla, Munro ... „ 296
Gouini, Fourn. ... ... „ 294

Eleusine Vol. Page
gracilis, Salisb. ... ... vii. 294
imbecilla, Steud. ... ... „ 299
inæqualis, Fourn. ... ... „ 294
indica, *Gærtn.* ... ... „ 293
marginata, Lindl. ... ... „ 294
monostachya, Spreng. ... „ 293
mucronata, Stokes ... ... „ 295
oligostachya, Wight ... ... „ 295
pectinata, Moench ... ... „ 295
penicillata, Spreng. ... „ 293
prostrata, Spreng. ... ... „ 295
racemosa, Heyne ... ... „ 295
radulans, Br. ... ... „ 296
rigidifolia, Fourn. ... ... „ 294
scabra, Fourn. ... ... „ 294
scindica, Duthie ... ... „ 296
sphærosperma, Stokes ... „ 294
? *stolonifera*, Br. ... ... „ 294
stricta, Roxb. ... ... „ 294
Tocussa, Fresen. ... ... „ 294
tristachya, Lamk. ... ... „ 294
verticillata, *Roxb.* ... ... „ 295
Wallichii, Munro ... ... „ 295
Elichrysum, vide *Helichrysum* ... ... iii. 280
Elionurus, *Humb. & Bonpl.* vii. 161
Grisebachii, Schm. ... ... „ 161
hirsutus, *Munro* ... ... „ 162
pertusus, Nees ... ... „ 173
Royleanus, *Nees* ... ... „ 161
Elkania multinervis, Schl. ... v. 582
? *sp.*, Hohen. ... ... „ 585
Ellertonia, *Wight* ... ... iii. 641
Rheedii, *Wight* ... ... „ 641
Ellipanthus, *Hk. f.* ... ... ii. 55
calophyllus, *Kurz* ... ... „ 55
Griffithii, *Hk. f.* ... ... „ 56
Helferi, *Hk. f* ... ... „ 55
Thwaitesii, *Hk. f.* ... ... „ 55
tomentosus, *Kurz* ... ... „ 56
tomentosus, Hk. f. ... ... „ 54
Ellipeia, *Hk. f. & T.* ... ... i. 52
cuneifolia, *Hk. f. & T.* ... „ 52
ferruginea, *Hk f. & T.* ... „ 52
glabra, *Hk. f. & T.* ... ... „ 52
nervosa, *Hk. f. & T.* ... „ 52
Elodea formosa, Jack ... ... i. 258
sp., Griff. ... ... „ 257
Elsholtzia, *Willd.* ... ... iv. 642
Beddomei, *Clarke* ... ... „ 643
blanda, *Benth.* ... iv. 643, 646
cristata, *Willd.* ... ... iv. 645
densa, *Benth.* ... ... „ 645
eriostachya, *Benth.* ... ... „ 645
eriostachya, Hk. f. & T. „ 645
flava, *Benth.* ... ... „ 642
Griffithii, *Hk. f.* ... ... „ 644

Elsholtzia Vol. Page
Hoffmeisteri, Klotz. ... ... iv. 645
incisa, *Benth.* ... ... „ 644
leptostachya, *Benth.* ... „ 646
ocimoides, Pers. ... ... „ 610
oppositifolia, Poir. ... ... „ 642
paniculata, Willd. ... ... „ 631
pilosa, *Benth.* ... ... „ 644
polystachya, *Benth.* iv. 643, 646
pusilla, Benth. ... ... iv. 645
strobilifera, *Benth.* ... ... „ 645
Thompsoni, *Hk. f.* ... ... „ 643
? *villosa*, Roxb. ... ... „ 632
Elymus, *Linn.* ... ... vii. 373, 421
Caput Medusæ, Forsk. ... vii. 90
dahuricus, *Turcz.* ... ... „ 374
dasystachys, *Trin.* ... ... „ 374
glaucus, Buckl. ... ... „ 373
jenisseensis, Turcz. ... ... „ 374
nutans, Griseb. ... ... „ 373
sibiricus, *Linn.* ... ... „ 373
tener, Linn. f. ... ... „ 373
? Thomsoni, *Hk. f.* ... ... „ 374
Elyna, Schrad. ... ... vi. 696
capillifolia, Dcne. ... ... „ 697
capillifolia, Hend. ... ... „ 701
filifolia, Turcz. ... ... „ 699
kokanica, Regel ... ... „ 698
? *laxa*, Kunth ... ... „ 698
schænoides, C. A. Mey. ... „ 697
sibirica, Turcz. ... ... „ 697
spicata, Boiss. ... ... „ 697
stenocarpa, Kar. & Kir. ... „ 698
sp., Hk. f. & T. vi. 695, 696, 697, 699
Elytranthe albida, Bl. ... ... v. 222
farinosa, G. Don ... ... „ 216
formosa, G. Don ... ... „ 220
retusa, G. Don ... ... „ 219
sphærocarpus (*sphæroidea*), G. Don ... ... „ 221
Elytraria, *Vahl* ... ... iv. 394
crenata, *Vahl* ... ... „ 394
indica, Pers. ... ... „ 394
lyrata, Vahl ... ... „ 394
marginata, Beauv. ... ... „ 394
Vahliana, Michx. ... ... „ 394
virgata, Vahl ... ... „ 394
Elytrophorus, *Beauv.* ... ... vii. 306
articulatus, *Beauv.* ... ... „ 306
Embamma cordigera, Griff. ... i. 664
heterantha, Griff. ... ... „ 664
Embelia, *Burm.* ... ... iii. 512
adnata, *Bedd.* ... ... „ 514
amentacea, *Clarke* ... ... „ 514
? *Basaal*, A. DC. ... ... „ 515
canescens, *Jack* ... ... „ 514
coriacea, *A. DC.* ... ... „ 513
coriacea, Wall. ... ... „ 514

Embelia ... Vol. Page
esculenta, D. Don ... ... iii. 515
ferruginea, Wall. ... ... „ 515
floribunda, *Wall.* ... ... „ 514
Gamblei, *Kurz* ... ... „ 516
garciniæfolia, Wall. ... iii. 513, 514
Gardneriana, *Wight* ... iii. 517
glandulifera, Wight ... „ 513
Grossularia, Retz. ... ... „ 619
Lampani (Limpani), *Scheff.* „ 514
? lucida, Wall. ... ... „ 517
macrophylla, Scheff. ... „ 513
microcalyx, *Kurz* ... ... „ 513
Myrtillus, *Kurz* ... ... „ 516
Nagushia, D. Don ... ... „ 516
nutans, *Wall.* ... ... „ 517
oblongata, Miq. ... ... „ 513
parviflora, *Wall.* ... ... „ 515
picta, A. DC. ... ... „ 515
? *reticulata*, Wall. ... ... „ 515
Ribes, *Burm.* ... ... „ 513
robusta, *Roxb.* ... ... „ 515
sessiliflora, *Kurz* ... ... „ 513
? *Tsjeriam-Cottam*, A. DC. „ 515
umbellulata, Wall. ... ... „ 512
urophylla, Wall. ... ... ii. 812
vestita, *Roxb.* ... ... iii. 517
vestita, Kurz ... ... „ 517
villosa, Wall. ... ... iii. 514, 515
viridiflora, *Scheff.* ... ... iii. 516
sp., Bedd. ... ... „ 514
sp., Griff. ... ... „ 517
Emblica officinalis, Gærtn. v. 289
Palasis, Ham. ... ... „ 275
racemosa, Spreng. ... ... „ 285
Embryogonia arborea, Teysm. & Binn. ... ... ii. 446
lucida, Bl. ... ... „ 454
Embryopteris gelatinifera, G. Don ... ... iii. 556
glutenifera, Roxb. ... ... „ 556
Kaki, G. Don ... ... „ 555
lanceolata, G. Don ... ... „ 556
peregrina, Gærtn. ... ... „ 556
Emericia Pergularia, R. & S. iii. 651
Emilia, *Cass.* ... ... iii. 335
angustifolia, DC. ... ... „ 336
flammea, *Cass.* ... ... „ 336
mucronata, Wall. ... ... „ 336
prenanthoidea, *DC.* ... „ 336
prenanthoidea, Thw. iii. 336, 337
sagittata, DC. ... ... iii. 336
scabra, DC. ... ... „ 336
sonchifolia, *DC.* ... ... „ 336
Walkeri, *Hk. f.* ... ... „ 337
zeylanica, *Clarke* ... ... „ 336
Emmenospermum, Clarke ... iv. 304, 305, 734
Empusa paradoxa, Lindl. ... v. 698
paradoxa, Wall. ... ... „ 696
Empusaria sp., Rchb f. ... v. 698
Enchidium verticillatum, Jack v. 398
Endiandra, *Br.* ... ... v. 126
? *Candolleana*, Meissn. ... „ 125
firma, *Nees* ... ... „ 126
Maingayi, *Hk. f.* ... ... „ 127
Endopogon Amomum, Nees ... iv. 435
argutus, Nees ... ... „ 432
capitatus, Wight ... ... „ 433
consanguineus, Nees iv. 432, 435
cuspidatus, Benth. ... ... iv. 435
decurrens, Nees ... iv. 436, 440
digitalis, Nees ... ... iv. 432
foliosus, Wight ... ... „ 433
Gardnerianus, Nees ... „ 446
hypoleucus, Nees ... iv. 432, 436
integrifolius, Dalz. ... ... iv. 458
khassyanus, Nees ... ... „ 436
macrostegius, Nees ... ... „ 456
rhamnifolius, Wight ... „ 433
Strobilanthes, Wight ... „ 439
versicolor, Wight ... ... „ 435
viscosus, Nees ... ... „ 431
vitellinus, Nees ... ... „ 512
Endospermum, *Benth.* ... v. 458
chinense, ? *Benth.* ... ... „ 458
malaccense, *Muell.* ... ... „ 458
perakense, *King* ... ... „ 458
Endotropis auriculata, Dcne. iv. 25
caudata, Miq. ... ... „ 25
Jacquemontii, Dcne. ... „ 26
Roylei, Dcne. ... ... „ 26
Engelhardtia, *Leschen.* ... v. 595
acerifolia, *Bl.* ... ... „ 596
chrysolepis, Hance ... ... „ 596
Colebrookiana, *Lindl.* ... „ 596
nudiflora, *Hk. f.* ... ... „ 597
palembanica, Miq. ... ... „ 596
rigida, Bl. ... ... „ 597
Roxburghiana, Lindl. ... „ 595
serrata, *Bl.* ... ... „ 596
spicata, *Bl.* ... ... „ 595
villosa, Kurz ... ... „ 596
Wallichiana, *Lindl.* ... „ 596
Enhalus, *Rich.* ... ... v. 663
acoroides, Zoll. ... ... „ 663
Koenigii, *Rich.* ... ... „ 663
marinus, Griff. ... ... „ 663
sp., Griff. ... ... „ 663
Enhydra, *Lour.* ... ... iii. 304
fluctuans, *Lour.* ... ... „ 304
Heloncha, DC. ... ... „ 304
Enicostema, *Bl.* ... ... iv. 100
littorale, *Bl.* ... ... „ 101
Enkianthus, *Lour.* ... ... iii. 461

Enkianthus Vol. Page
himalaicus, *Hk. f. & T.* ... iii. 461
Enkleia malaccensis, Griff. ... v. 198
Enkylia digyna, Griff. ... ii. 633
trigyna, Griff. ... „ 633
Enneapogon dipsaceus, Wall. vii. 301
persicum, Boiss. ... „ 301
Entada, *Adans.* ... ii. 286
monostachya, DC. ... „ 287
Parrana, Spreng. ... „ 287
Pursætha, DC. ... „ 287
Rheedei, Spreng. ... „ 287
Rumphii, Scheff. ... „ 287
scandens, *Benth.* ... „ 287
Enteropogon, *Nees* ... vii. 284
melicoides, *Nees* ... „ 284
Entosiphon, Bedd. ... ii. 311
Eophylon Lobbii, A. Gray ... iv. 95
EPACRIDEÆ ... iii. 477
Epaltes, *Cass.* ... iii. 274
divaricata, *Cass.* ... „ 274
linearifolia, DC. ... iii. 248, 274
pygmæa, *DC.* ... iii. 274
Ephebopogon gratus, Nees ... vii. 116
Ephedra, *Linn.* ... v. 640
alata, Edgew. ... v. 641, 863
Alte, Brand. ... v. 641, 863
asparagoides, Griff. ... v. 863
ciliata, Fisch. & Mey. ... „ 641
distachya, Linn. ... v. 640, 864
foliata, *Boiss.* ... v. 641, 863
foliata, Aitch. ... v. 863
Gerardiana, *Wall.* ... v. 640, 863
glauca, Regel ... v. 641
intermedia, *Schr. & Mey.* „ 863
macrocephala, Bert. ... „ 640
monostachya, Linn. ... „ 640
nebrodensis, *Tineo* ... „ 864
pachyclada, *Boiss.* ... v. 641, 863
peduncularis, *Boiss.* v. 641, 863
vulgaris, *Rich.* ... v. 640
Ephippiorhynchium triflorum, Nees ... vi. 670
Epicarpurus asper, Steud. ... v. 489
orientalis, Bl. ... „ 489
spinosus, Wight ... „ 488
timorensis, Dcne. ... „ 488
zeylanicus, Thw. ... „ 488
sp., Hk. f. & T. ... „ 487
Epicharis exarillata, Arn. ... i. 546
exarillata, Nimmo ... „ 561
mollis, Wall. ... „ 548
sp., Kurz ... „ 552
Epichysianthus macrophyllus, Voigt ... iii. 661
Epicranthes barbata, Rchb. f. v. 781
javanica, Bl. ... „ 753
EPIDENDREÆ ... v. 667, 669, 675

Vol. Page
Epidendrum aloides, Curt. (*aloifolium*), ... vi. 11
aloifolium, Linn. ... „ 10
bidentatum, Kœn. ... „ 197
calceolare, Ham. ... „ 60
calceolaria, Kœn. ... „ 197
calceolaria terrestre, Kœn. „ 197
clavatum, Kœn. ... „ 197
clavatum, Retz. ... „ 66
complanatum, Kœn. ... „ 197
complanatum, Retz. ... „ 41
Dumunsuttei, Ham. ... v. 748
ensifolium, Linn. ... vi. 14
Flabellum Veneris, Kœn. „ 197
Flos æris? Kœn. ... „ 197
Flos-æris, Linn. ... „ 28
geniculatum, Ham. ... „ 45
hexandrum, Kœn. ... vi. 84, 198
Hippium, Ham. ... vi. 32
humile, Sm. ... v. 841
liliifolium (*liliiflorum*), Kœn. vi. 198
longiflorum, Kœn. ... „ 198
lycopodioides, Kœn. ... „ 198
moschatum, Ham. ... v. 744
Myosurus, Forst. ... „ 685
nudum, Kœn. ... vi. 198
ophrydis, Kœn. ... „ 198
orchideum, Kœn. ... „ 198
plantaginifolium, Kœn. ... „ 198
præcox, Sm. ... v. 840
præmorsum, Roxb. ... vi. 63
pusillum, Kœn. ... „ 198
pusillum, Retz. ... „ 37
resupinatum, Forst. ... v. 688
retusum, Linn. ... vi. 32
saaronicum, Kœn. ... „ 197
scriptum, Linn. ... „ 18
sessile, Kœn. ... v. 753, vi. 198
spathulatum, Kœn. ... vi. 198
spathulatum, Linn. ... „ 50
subulatum, Kœn. ... „ 198
subulatum, Retz. ... „ 44
Supplex minima, Kœn. ... „ 198
tenuifolium, Linn. ... „ 25
tessellatum, Roxb. ... „ 52
tomentosum, Kœn. v. 803, vi. 198
triste, Forst. ... vi. 25
umbellatum, Ham ... „ 66
variegatum, Kœn. ... „ 198
sp., Griff. ... v. 842
Epigynium acuminatum, Klotz. ... iii. 455
affine, Klotz. ... „ 453
Donianum, Klotz. ... „ 453
Dunalianum, Klotz. ... „ 453
Griffithianum, Klotz. ... „ 454
Leschenaultii, Klotz. ... „ 455

Epigynium Vol. Page
malaccense, Klotz. ... ... iii. 454
neilgherrense, Klotz. ... „ 455
obovatum, Klotz. ... ... „ 447
serratum, Klotz. ... ... „ 452
Sprengelii, Klotz. ... ... „ 453
venosum, Klotz. ... ... „ 452
Epigynum, *Wight* ... ... iii. 665
Griffithianum, *Wight* ... „ 666
? lævigatum, *Hk. f.* ... ... „ 666
Maingayi, *Hk. f.* ... ... „ 666
? parviflorum, *Hk. f.* ... „ 666
Epilasia, *Bunge* ... ... iii. 419
ammophila, *Bunge* ... ... „ 419
Bungei, Clarke ... ... „ 419
Epilobium, *Linn.* ... ... ii. 582
alpinum, *Linn.* ... ... „ 586
anagallidifolium, Lamk. ... „ 585
angustifolium, *Linn.* ... „ 582
brevifolium, D. Don ... „ 586
cylindricum, D. Don ... „ 585
fruticosum, Lour. ... ... „ 587
Gerardianum, Wall. ... „ 583
hirsutum, *Linn.* ... ... „ 583
Hookeri, *Clarke* (see *Errata*) ... ... „ 585
khasianum, *Clarke* ... ... „ 585
lætum, Wall. ... ... „ 584
latifolium, *Linn.* ... ... „ 583
laxum, Royle ... ... „ 587
origanifolium, *Lamk.* ... „ 586
palustre, *Linn.* ... ... „ 585
parviflorum, *Schreb.* ... „ 584
reticulatum, *Clarke* ... ... „ 583
roseum, *Schreb.* ... ... „ 584
sericeum, Benth. ... ... „ 584
serratum, Jacquem. ... ... „ 583
speciosum, Dcne. ... ... „ 583
spicatum, Lamk. ... ... „ 583
tetragonum, *Linn.* ... ... „ 586
tomentosum, Vent. ... ... „ 584
trichoneurum, Hausk. (see *Errata*).
vestitum, Benth. ... ... ii. 584
sp., Hk. f. & T. ... ii. 585, 586
Epimedium, *Linn.* ... ... i. 112
elatum, *Morr. & Dcne.* ... „ 112
Epipactis, *Br.* ... ... vi. 125
? *americana*, Lindl. ... ... „ 126
amœna, Ham. ... ... „ 126
? *bicarinata*, Ham. ... ... „ 6
carinata, Roxb. ... ... „ 121
consimilis, *Wall.* ... ... „ 126
consimilis, D. Don ... ... „ 125
Dalhousiæ, Wight ... ... „ 125
gigantea, Dougl. ... ... „ 126
graminifolia, Roxb. ... ... v. 814
herbacea, Lindl. ... ... vi. 125
intrusa, Lindl. ... ... „ 126

Cyanotis Vol. Page
Juliana, Roxb. ... ... vi. 119
latifolia, *Sw.* ... ... „ 125
macrostachya, Lindl. ... „ 125
macrostachya, Wight ... „ 126
plicata, Roxb. ... ... „ 119
Royleana, *Lindl.* ... ... „ 126
veratrifolia, Boiss. ... ... „ 126
Epiphanes javanica, Bl. ... vi. 123
pallens, Rchb. f. ... ... „ 122
Epipogum, *Gmel.* ... ... vi. 124
aphyllum, *Sw.* ... ... „ 124
Gmelini, Rich. ... ... „ 124
nutans, *Rchb. f.* ... ... „ 124
roseum, Lindl. ... ... „ 124
Epipremnum, *Schott* ... ... vi. 548
Beccarii, Engl. ... ... „ 546
giganteum, *Schott* ... ... „ 548
humile, *Hk. f.* ... ... „ 549
medium, Engl. ... ... „ 540
mirabile, *Schott* ... ... „ 549
Epiprinus, *Griff.* ... ... v. 463
malayanus, *Griff.* ... ... „ 464
Epirhizanthes, Bl. ... ... i. 207
Epistylium cordifolium, Baill. v. 300
floribundum, Thw. ... v. 303, 304
glaucescens, Baill. ... ... v. 302
latifolium, Thw. ... .. „ 300
montanum, Thw. ... ... „ 303
phyllanthoides, Baill. ... „ 302
polyphyllum, Thw. ... ... „ 302
pulchrum, Baill. ... ... „ 302
Roxburghii, Baill. ... ... „ 300
zeylanicum, Baill. ... ... „ 302
Epithema, *Bl.* ... ... iv. 369
carnosum, *Benth.* ... ... „ 369
carnosum, Thw. ... ... , 369
ceylanicum, Wight ... ... „ 369
zeylanicum, Gardn. ... „ 369
? *sp.*, Wall. ... ... „ 369
Epithinia malayana, Jack ... iii. 125
sp., Griff. ... ... „ 125
Eragrostidi affine, Wall. ... vii. 295
Eragrostis, *Beauv.* ... ... vii. 312
affine, Wall. ... ... vii. 325, 327
amabilis, *W. & A.* ... ... vii. 317
amabilis, Willd. ... ... „ 324
arabica, J. & S. ... ... „ 315
aspera, *Nees* ... ... „ 314
atropurpurea, Hochst. ... „ 324
atro-virens, Lange ... ... „ 322
aurea, Steud. ... ... „ 316
bahiensis, Hance ... ... „ 319
barbulata, *Stapf* ... ... „ 319
bifaria, *Wight* ... ... „ 325
bifaria, Thw. ... ... „ 326
bifaria, Wall. .. ... vii. 326, 327
brachyphylla, *Stapf* ... ... vii. 327

Eragrostis Vol. Page
brevifolia, Benth. ... ... vii. 295
Browneana, Nees ... ... „ 319
Brownei, Nees ... ... vii. 318, 319
caudata, Nees ... ... vii. 316
cernua, Steud. ... ... „ 327
ciliaris, *Link* ... ... „ 314
ciliaris, Boiss. ... ... „ 314
ciliaris, Pluk. ... ... „ 26
ciliaris, Trin. ... ... „ 315
ciliata, *Nees* ... ... „ 313
coarctata, *Stapf* ... ... „ 313
Collettii, *Stapf*... ... ... „ 326
collocarpa, K. Schum. ... „ 322
confinis, Nees ... ... „ 327
coromandelina, *Trin.* ... „ 326
cretacea, Nees ... ... „ 326
Cumingii, Steud. ... ... „ 319
cylindrica, Aitch. ... ... „ 313
cynosuroides, *Beauv.* ... „ 324
despiciens, Schult. ... ... „ 315
diandra, Aitch. ... ... „ 316
diarrhena, Steud. ... ... „ 316
diplachnoides, Steud. ... „ 316
elegantula, *Steud.* ... ... „ 318
elegantula, Nees vii. 315, 318, 323
elongata, *Jacq.* ... ... vii. 319
ferruginea, *Beauv.* ... ... „ 324
flexuosa, Steud. ... ... „ 320
gangetica, Steud. ... ... „ 318
hapalantha, Trin. ... ... „ 316
Hochstetteri, Steud. ... „ 316
indica, Steud. ... ... „ 323
interrupta, *Beauv.* ... ... „ 316
interrupta, Steud. ... ... „ 319
japonica, Trin.... ... ... „ 316
Koenigii, Link ... ... „ 316
laxa, Baker ... ... „ 315
leioptera, *Stapf* ... ... „ 325
lepida, Hochst. ... ... „ 314
lobata, Trin. ... ... „ 314
luzoniensis, Steud. ... ... „ 318
major, *Host* ... ... „ 320
malayana, *Stapf* ... ... „ 317
mangalorica, Hochst. ... „ 316
megastachya, Link ... ... „ 320
minor, *Host* ... ... „ 321
minutiflora, Presl ... ... „ 316
mossulensis, Steud.... ... „ 316
? *mucronata*, R. & S. ... „ 322
mucronata, Trim. ... ... „ 328
multiflora, Aschers. ... „ 320
multiflora, Trin. ... ... „ 320
nardoides, *Trin.* ... ... „ 326
nigra, *Nees* ... ... „ 324
nutans, Nees ... ... „ 316
nutans, Thw. ... ... „ 316
orientalis, Nees ... ... „ 319

Eragrostis Vol. Page
orientalis, Trin. ... ... vii. 324
ovina, Nees ... ... „ 318
paniculata, Steud. ... ... „ 314
paniculata, Thw. ... ... „ 324
papposa, *Steud.* ... ... „ 322
parviflora, Trin. ... ... „ 323
parviglumis, Hochst. ... „ 322
pellucida, Steud. ... ... „ 323
phleoides, *Stapf* ... ... „ 313
pilosa, *Beauv.* ... ... „ 323
plumosa, Boiss. ... ... „ 314
plumosa, Link ... ... „ 315
plumosa, Thw. ... ... „ 315
poæformis, Link ... ... „ 321
poæoides, Beauv. ... ... „ 321
poæoides, Trim. ... ... „ 322
poæoides, Trin. ... ... „ 320
polymorpha, R. & S. ... „ 322
polymorpha, Trin. ... ... „ 317
procera, Steud. ... ... „ 329
pubescens, Steud. ... ... „ 319
pulchella, Parl. ... ... „ 314
punctata, Link ... ... „ 323
rhachitricha, Hochst. ... „ 320
rigidifolia, Hochst. ... ... „ 323
riparia, Nees ... ... „ 315
riparia, Steud. ... ... „ 315
Rothii, Steud. ... ... „ 316
Rottleri, *Stapf* ... ... „ 321
rubens, Hochst. ... ... „ 317
rupestris, Steud. ... ... „ 313
secunda, *Nees* ... ... „ 326
speirostachya, Coss. & Dur. „ 323
stenophylla, *Hochst.* ... „ 318
stricta, Steud. ... ... „ 316
tenella, *R. & S.* ... ... „ 315
tenella, Benth. ... ... „ 316
tenella, Nees ... ... „ 314
tenella, R. & S. ... ... „ 315
tenellula, Steud. ... ... „ 317
tenuifolia, *Hochst.* ... ... „ 322
tenuissima, Schrad. ... ... „ 317
terebinthacea, Kurz ... ... „ 316
thraulostachys, K. Schum. „ 325
tremula, *Hochst.* ... ... „ 320
unioloides, Nees ... ... „ 317
verticillata, Coss. ... ... „ 323
verticillata, Nees ... ... „ 316
verticillata, R. & S. ... ... „ 323
? *viscosa*, Dalz. &. Gibs. ... „ 316
viscosa, Trin. ... ... „ 315
viscosa, Wight ... ... „ 321
vulgaris, Presl ... ... vii. 320, 323
Wightiana, Benth. ... ... vi.. 327
Willdenoviana, *Nees* ... „ 322
Willdenoviana, Nees ... „ 319
? *Willdenovii*, Steud. ... „ 318

Eragrostis Vol. Page
zeylanica, Nees & Mey. ... vii. 319
sp., Benth. ... „ 328
sp., Wall. vii. 313, 314, 315, 316, 317, 318, 319, 320, 322, 323, 324, 329
Eragrostoides, Wall vii. 313, 325
Eranthemum, *Linn.* ... iv. 497
album, *Nees* ... „ 498
amœnum, Ham. ... „ 420
Andersoni, *Masters* ... „ 499
barlerioides, Roxb. ... iv. 416, 420
bifarium, *Nees* ... iv. 500
Blumei, Teysm.? ... „ 499
capense, Linn. ... „ 421
cinnabarinum, *Wall.* ... „ 499
crenulatum, *Lindl.* ... „ 497
crenulatum, Nees ... „ 598
crenulatum, Wall. ... iv. 497, 498
diantherum, Roxb. ... iv. 497
Ecbolium, T. Anders. ... „ 544
Edgeworthianum, Nees ... „ 418
elatum, Kurz ... „ 498
elegans, Masters ... „ 499
fastigiatum, Spreng. ... „ 421
graciliflorum, *Nees* ... „ 500
indicum, *Clarke* ... „ 497
latifolium, Kurz ... „ 498
leptanthus, *Clarke* ... „ 500
macrophyllum, Wall. ... „ 419
malabaricum, *Clarke* ... „ 497
malaccense, *Clarke* ... „ 498
montanum, Hook. ... „ 496
montanum, Roxb. ... „ 421
montanum, Wall. ... „ 420
nervosum, Br. ... „ 418
nervosum, Dalz. & Gibs. ... „ 421
palatiferum, *Nees* ... „ 498
palatiferum, Hk. f. ... iv. 498, 499
Parishii, *Clarke* ... iv. 499
pubescens, *Roth* ... „ 500
pulchellum, Andr. ... „ 418
pulchellum, Roxb. ... „ 420
punctatum, Nees ... „ 499
purpurascens, Nees ... „ 420
racemosum, *Roxb.* ... „ 497
roseum, *Br.* ... „ 419
salaccense, Bl. ... „ 420
semperflorens, Roth ... „ 497
strictum, Coleb. ... „ 419
succisifolium, Kurz ... „ 499
suffruticosum, Roxb. ... „ 420
tetragonum, Wall. ... „ 420
Wightianum, Wall. ... „ 421
sp., Griff. ... „ 418
sp., Hk. f. & T. ... iv. 418, 421
Erebennus canaranus, Alef. ... i. 341
Eremochloa, *Büse* ... vii. 140
bimaculata, *Hack.* ... „ 140

Eremochloa Vol. Page
ciliatifolia, Hack. ... vii. 141
Helferi, *Munro* ... „ 141
leersioides, *Hack.* ... „ 140
muricata, *Hack.* ... „ 140
zeylanica, *Hack.* ... „ 140
Eremostachys, *Bunge* ... iv. 694
acanthocalyx, *Boiss.* ... „ 695
laciniata, Aitch. ... „ 695
superba, *Royle* ... „ 695
Vicaryi, *Benth.* ... „ 695
Eremurus, *Bieb.* ... vi. 332
himalaicus, *Baker* ... „ 332
persicus, *Boiss.* ... „ 333
Eria, *Lindl.* ... v. 785
acervata, *Lindl.* ... „ 796
acutifolia, *Lindl.* ... „ 800
aeidostachya, *Rchb. f.* ... „ 809
affinis, Griff. ... „ 797
alba, *Lindl.* ... „ 795
amica, *Rchb. f.* ... „ 800
andamanica, *Hk. f.* v. 801, vi. 190
Andersonii, *Hk. f.* v. 795, vi. 190
Ania, Rchb. f. ... v. 820
annulata, Lindl. ... „ 808
anthomeniaca, Rchb. f. ... „ 798
aporina, *Hk. f.* ... v. 803, vi. 191
articulata, *Lindl.* ... v. 788
bambusifolia, *Lindl.* ... „ 805
barbata, *Rchb. f.* ... „ 803
bicolor, *Lindl.* ... v. 793, 799
bicornis, Rchb. f. ... v. 821
biflora, *Griff.* ... „ 800
biflora, Lindl. ... „ 806
bipunctata, *Lindl.* ... „ 792
braccata, *Lindl.* ... „ 787
braccata, Dalz. & Gibs. ... „ 787
bractescens, *Lindl.* ... „ 796
calamifolia, *Hk. f.* ... vi. 191
carinata, *Gibs.* ... v. 803
clavicaulis, *Wall.* ... „ 799
clavicaulis, ? Lindl. ... „ 805
concolor, *Par. & Rchb. f.* „ 798
confusa, *Hk. f.* ... „ 796
convallarioides, *Lindl.* ... „ 791
coronaria, Rchb. f. ... „ 828
crassicaulis, *Hk. f.* ...v. 805, vi. 191
cylindripoda, Griff. (*lapsu* Trichosma) ... v. 827
Dalzellii, *Lindl.* ... „ 789
dasyphylla, *Par. & Rchb. f.* „ 808
dasypus, *Rchb. f.* ... „ 802
Dayana, *Rchb. f.* ... „ 802
discolor, Lindl. ... v. 802, vi. 190
elata, *Hk. f.* ... v. 794
elongata, *Lindl.* ... „ 801
Elwesii, Rchb. f. ... „ 786
ephemera, Rchb. f. ... „ 799

Eria Vol. Page
eriopsidobulbon, *Par. & Rchb. f.* ... ... v. 796
excavata, *Lindl.* ... v. 795, 796
exilis, *Hk. f.* ... ...v. 788, vi. 190
extinctoria, *Oliv.* ... ... v. 788
ferox, *Bl.* ... ... ,, 806
ferruginea, *Lindl.* ... ... ,, 804
filiformis, Rchb. f. ... ... ,, 789
flava, *Lindl.* ... ... ,, 801
flava, Griff.... ... ... ,, 801
flava, Wall. ... ... ,, 803
floribunda, *Lindl.* ... ... ,, 792
Fordii, Rolfe ... ... ,, 808
fragrans, *Rchb. f.* ... ... ,, 794
gracilis, *Hk. f.* ... v. 806, vi. 191
graminifolia, *Lindl.* ... v. 794
Griffithii, *Rchb. f.* ... ... ,, 797
hologlossa, Par. & Rchb. f. ,, 822
iridifolia, *Hk. f.* ... v. 790, vi. 190
Jerdoniana, Rchb. f. ... v. 787
khasiana, Lindl. ... ... ,, 799
Kingii, *Hk. f.* ... ... v. 790, vi. 190
Kurzii, T. Anders. ... ... v. 797
lanata, Griff. ... ... ,, 801
lancifolia, *Hk. f.* ... v. 804, vi. 191
laniceps, Rchb. f. ... ... v. 801
leiophylla, *Lindl.* ... ... ,, 809
leptocarpa, *Hk. f.* ... v. 805, vi. 191
Lichenora, *Lindl.* ... ... v. 787
Lindleyana, Griff. ... ... ,, 794
Lindleyi, *Thw.* ... ... ,, 799
longifolia, *Hk. f.* ...v. 790, vi. 190
Maingayi, *Hk. f.* ...v. 798, vi. 190
marginata, *Rolfe* ... ... v. 800
Meirax, *N. E. Br.* ... ... ,, 786
merguensis, *Lindl.* ... ... ,, 791
microchilos, Lindl. ... ... ,, 789
monticola, *Hk. f.* ... ... ,, 806
muscicola, *Lindl.* ...v. 789, vi. 190
Myosurus, Hk. f. ... ... v. 810
myristiciformis, *Hk. f.* ... ,, 797
mysorensis, *Lindl.* ... ... ,, 793
nana, *A. Rich.* ... ... ,, 789
nutans, *Lindl.* ... ... ,, 800
obesa, *Lindl.* ... ... ,, 793
obliqua, *Lindl.* ... ... ,, 790
oligantha, *Hk. f.* ...v. 807, vi. 191
ornata, Lindl. ... ... v. 803
ovata, Lindl. ... ... ,, 793
paniculata, *Lindl.* ... ... ,, 789
pannea, *Lindl.* ... v. 804, vi. 191
Parishii, *Lindl. & Rchb. f.* v. 787
pauciflora, *Wight* ... ... ,, 799
pellipes, *Rchb. f.* ... ... ,, 802
perpusilla, *Par. & Rchb. f.* ,, 788
perpusilla, Par. & Rchb. f. ,, 811
planicaulis, Wall. ... ... ,, 824
Eria Vol. Page
Pleurothallis, *Par. & Rchb. f.* v. 804
polystachya, *A. Rich.* ... ,, 792
polyura, Lindl. ... ... ,, 809
pubescens, *Wight* ... ... ,, 793
pubescens, Lindl. ... ... ,, 801
pulchella, *Lindl.* v. 801, vi. 190
pulchella, Griff. ... ... v. 797
pulvinata, *Lindl.* ... ... ,, 807
pumila, *Lindl.* ... ... ,, 791
pusilla, *Lindl.* ... ... ,, 787
pygmæa, *Hk. f.* v. 804, vi. 191
ramosissima, Wall. ... ... v. 826
recurvata, *Hk. f.* v. 797, vi. 190
reticosa, *Wight* ... ... v. 787
reticulata, *Benth.* ... ... ,, 786
Rimanni, *Rchb. f.* ... ... ,, 809
ringens, *Rchb. f.* ... ... ,, 793
rosea, Lindl. ... ... ,, 808
rufinula, *Rchb. f.* ... ... ,, 807
saccifera, *Hk. f.* v. 797, vi. 190
scabrilinguis, *Lindl.* ... v. 792
Scortechinii, *Hk. f.* v. 809, vi. 191
secundiflora, Griff. ... ... v. 791
sicaria, *Lindl.* ... ... ,, 802
speciosa, Rchb. f. ... ... ,, 822
sphærochila, Lindl. ... ... ,, 795
stricta, *Lindl.* ... ... ,, 791
suavis, Lindl. ... ... ,, 827
teretifolia, Griff. ... ... ,, 804
Thwaitesii, *Trim.* ... ... vi. 191
Thwaitesii, Hk. f. ... ... v. 803
tomentosa, *Hk. f.* ... ... ,, 803
tomentosa, Lindl. ... ... vi. 198
tricolor, *Thw.* ... . v. 798
truncata, *Lindl.* ... ... ,, 799
tuberosa, *Hk. f.* v. 807, vi. 191
uniflora, Dalz. ... ... v. 787
ustulata, *Par. & Rchb. f.* ,, 787
velutina, *G. Lodd* ... ... ,, 807
velutina, Thw. ... ... ,, 803
vestita, *Lindl.* ... ... ,, 806
vittata, *Lindl.* ... ... ,, 794
Wightii, Rchb. f. .. ... ,, 821
Eriachne, *Br.* ... ... vii. 269
chinensis, Hance ... ... ,, 269
Hookeri, Munro ... ... ,, 269
pallescens, *Br.* ... ... ,, 269
triseta, *Nees* ... ... ,, 269
Erianthera lobelioides, Nees iv. 505
rhomboidea, Benth. ... ... ,, 678
serpyllifolia, Nees ... ... ,, 506
Eriantho affine, Wall. ... ... vii. 129
Erianthus, *Michx.* ... ... vii. 121
articulatus, F. Muell. ... ,, 109
aureus, Nees ... ... ,, 112
chrysothrix, *Hack.* ... ... ,, 125
Cumingii, F. Muell. ... ,, 112

Erianthus Vol. Page
elephantinus, *Hk. f.* ... vii. 122
fastigiatus, *Nees* ... ... „ 125
filifolius, *Nees* ... ... „ 123
fulvus, *Nees* ... ... vii. 118, 123
Griffithii, *Hk. f.* ... ... vii. 122
hexastachyus, Hochst. ... „ 112
Hookeri, *Hack.* ... ... „ 125
jamaicensis, Anderss. ... „ 121
japonicus, Str. & Wint. ... „ 123
longisetosus, *Anderss.* ... „ 124
mishmeensis, Munro ... „ 124
mollis, Griseb. ... ... „ 111
nudipes, Griseb. ... ... „ 107
pallens, Hack. ... ... „ 124
purpurascens, Anderss. ... „ 122
Ravennæ, *Beauv.* ... ... „ 121
Roxburghii, F. Muell. ... „ 112
rufipilus, Griseb. ... ... „ 123
rufus, Nees ... ... „ 112
sikkimensis, *Hk. f.* ... ... „ 123
speciosus, Debeaux ... ... „ 113
tristachyus, Nees ... vii. 110, 112
versicolor, *Nees* ... ... vii. 124
vulpinus, Nees ... ... „ 126
sp., Hk. f. & T. ... ... „ 113
sp., Wall. ... ... vii. 107, 123, 124
ERICACEÆ ... ... iii. 456
Ericala aquatica, G. Don ... iv. 110
argentea, G. Don ... ... „ 112
capitata, D. Don ... ... „ 113
carinata, D. Don ... ... „ 113
coronata, D. Don ... ... „ 114
decemfida, D. Don ... ... „ 112
depressa, D. Don ... ... „ 115
humilis, G. Don ... ... „ 111
marginata, D. Don ... ... „ 113
orbiculata, G. Don ... ... „ 111
pedicellata, D. Don ... ... „ 111
procumbens, G. Don ... „ 111
quadrifaria, G. Don ... „ 111
Royleana, G. Don ... ... „ 112
squarrosa, G. Don ... ... „ 111
tubiflora, G. Don ... ... „ 116
venusta, G. Don ... ... „ 116
Ericinea, Griff. ... ... iii. 469
Ericoila aquatica, Borkh. iv. 110
verticillata, Borkh. ... ... „ 101
Erigeron, *Linn.* ... ... iii. 254
acris, Clarke ... ... „ 255
ægyptiacus, Kurz ... ... „ 254
alatum, D. Don ... ... „ 271
alpinus, *Linn.* ... ... „ 255
andryaloides, *Benth.* ... „ 255
angustissimus, Lindl. ... „ 256
anomalus, DC. ... ... „ 253
asteroides, *Roxb.* ... ... „ 254
asteroides, Roxb. ... ... „ 270

Erigeron Vol. Page
asteroides, Wall. ... ... iii. 260
bellidioides, *Benth.* ... „ 256
canadensis, *Linn.* ... ... „ 254
falcatus, D. Don ... ... „ 270
graveolens, Linn. ... ... „ 292
hieracifolius, D. Don ... „ 263
hirsutus, Wall. ... ... „ 254
hispidus, DC. ... ... „ 254
Leschenaultii, DC. ... ... „ 256
leucanthus, D. Don ... ... „ 270
linifolius, Willd. ... ... „ 254
mollis, D. Don ... ... „ 261
monticolus, *DC.* ... ... „ 255
multicaulis, Wall. ... ... „ 255
multiradiatus, *Benth.* ... „ 256
obliquus, Linn. ... ... „ 260
pinnatifidus, D. Don ... „ 259
pyrifolius, Benth. ... ... „ 257
? *Roylei*, DC. ... ... „ 255
semibarbatus, DC. ... ... „ 255
sublyratus, Roxb. ... ... „ 254
trisulcus, D. Don ... ... „ 259
Wightianus, Wall. ... ... „ 299
Wightii, DC. ... ... „ 256
Erimatalia Rheedii, R. & S. iv. 181
Erinocarpus, *Nimmo* ... ... i. 394
Nimmoanus, *Grah.* ... ... „ 394
Erinus bilabiatus, Roxb. ... iv. 264
Eriobotrya, *Lindl.* ... ... ii. 370
angustissima, *Hk. f.* ... „ 372
bengalensis, *Hk. f.* ... ... „ 371
dubia, *Dcne.* ... ... „ 371
dubia, Dcne. ... ... „ 371
elliptica, *Lindl.* ... ... „ 372
elliptica, Hk. f. & T. ... „ 370
Hookeriana, *Dcne.* ... ... „ 371
integrifolia, Kurz ... ... „ 380
japonica, *Lindl.* ... ... „ 372
latifolia, *Hk. f.* ... ... „ 370
longifolia, *Hk. f.* ... ... „ 370
macrocarpa, *Kurz* ... ... „ 372
petiolata, *Hk. f.* ... ... „ 370
Eriobotryæ vel Photiniæ affinis, Miq. ... ... iii. 582
ERIOCAULEÆ ... ... vi. 571
Eriocaulon, *Linn.* ... ... vi. 571
achiton, *Kœrn.* ... ... „ 584
alpestre, *Hk. f. & T.* ... „ 578
argenteum, Mart. ... ... „ 582
argyræum, Steud. ... ... „ 582
atratum, *Kœrn.* ... ... „ 574
australe, Br. ... ... „ 580
bifistulosum, *Heurck* ... „ 572
bracteosum, Steud. ... ... „ 572
brevicapum, *Kœrn.* ... „ 575
Brownianum, *Mart.* ... „ 576
Capillus-naiadis, *Hk. f.* ... „ 572

Eriocaulon Vol. Page
caulescens, *Hk. f. & T.* vi. 572
ceylanicum, *Kœrn* „ 585
cinereum, Br. „ 578
cinereum, Ham. „ 578
Collettii, *Hk. f.* „ 575
collinum, *Hk. f.* „ 584
cristatum, *Mart.* „ 574
cristatum, Benth. „ 574
cristatum, Mart. „ 575
cuspidatum, *Dalz.* „ 581
Dalzellii, *Kœrn.* „ 580
Duthiei, *Hk. f.* „ 578
echinulatum, *Mart.* „ 579
erythropodum, Miq. „ 582
eurypeplon, *Kœrn.* „ 585
fluviatile, *Trim.* „ 585
gracile, Mart. „ 577
gregatum, *Kœrn.* „ 581
Hamiltonianum, Mart. „ 579
Helferi, *Hk. f.* „ 583
heterolepis, *Steud.* „ 585
hexangulare, Kunth „ 577
infirmum, Steud. „ 577
intermedium, Kœrn. „ 572
kiusianum, Maxim. „ 578
lanceolatum, *Miq.* „ 577
leucomelas, Steud. „ 574
longicuspis, *Hk. f.* „ 573
longifolium, Nees „ 580
luzulæfolium, *Mart.* „ 582
luzulæfolium, Thw. „ 584
Martianum, Wall. „ 582
melaleucum, *Mart.* „ 574
minimum, *Lam.* „ 585
minutum, *Hk. f.* „ 579
miserum, *Kœrn.* „ 575
mitophyllum, *Hk. f.* „ 575
Neesianum, *Kœrn.* „ 585
nepalense, *Presc.* „ 581
nigricans, Br. „ 584
nilagirense, Steud. „ 576
nitidum, Ham. „ 577
odoratum, *Dalz.* „ 574
oryzetorum, *Mart.* „ 579
polycephalum, *Hk. f.* „ 573
Pumilio, *Hk. f.* „ 581
pygmæum, Dalz. „ 584
quadrangulare, Lour. „ 580
quinquangulare, *Linn.* „ 582
quinquangulare, Heyne „ 574
quinquangulare, Wall. vi. 581, 583
rivulare, Dalz. vi. 580
robustum, *Steud.* „ 572
sericans, *Mart.* „ 577
setaceum, *Linn.* „ 572
setaceum, Benth. „ 572
setaceum, Heyne „ 577

Eriocaulon Vol. Page
setaceum, Wall. vi. 572
sexangulare, *Linn.* „ 580
sexangulare, Heyne „ 576
sexangulare, Mart. „ 577
sexangulare, Willd. „ 580
Sieboldianum, *Sieb. & Zucc.* „ 577
Sieboldianum, Kœrn. „ 578
Sollyanum, Royle „ 583
stellulatum, *Kœrn.* „ 579
subcaulescens, *Hk. f.* „ 573
subulatum, Bojer „ 583
tenue, Ham. „ 577
Thwaitesii, *Kœrn.* „ 583
trilobum, *Ham.* „ 583
truncatum, *Ham.* „ 578
viride, Kœrn. „ 581
Walkeri, *Hk. f.* „ 583
Wallichianum, Mart. vi. 578, 580
Wightianum, *Mart.* vi. 576
xeranthemoides, Heurck & Muell. „ 584
xeranthemum, *Mart.* „ 584
Eriochæta densiflora, Fig. & Not. vii. 87
nervosa, Fig. & Not. „ 87
secundiflora, Fig. & Not. „ 87
Eriochloa, *H. B. K.* vii. 20
annulata, Kunth „ 20
polystachya, *H. B. K.* „ 20
punctata, Ham. „ 20
succincta, Kunth „ 20
sundaica, Miq. „ 20
Eriochrysis attenuata, Nees vii. 120
fusca, Nees „ 120
fusca, Trin. „ 120
longifolia, Munro „ 125
Narenga, Nees „ 120
Eriococcus glaucescens, Morr. & Zoll. v. 302
Eriocoryne nidularis, Wall. iii. 376
Eriocycla, Lindl. ii. 680
nuda, Lindl. „ 680
sp., Hk. f. & T. „ 680
Eriodendron, *DC.* i. 349
anfractuosum, *DC.* „ 350
orientale, Steud. „ 350
Erioglossum, *Bl.* i. 672
edule, *Bl.* i. 672, 685
rubiginosum, Brand. i. 672
Erioidea, Griff. v. 803
Eriolæna, *DC.* i. 370
Candollei, *Wall.* „ 370
Hookeriana, *W. & A.* „ 370
quinquelocularis, *Wight* „ 371
spectabilis, *Planch.* „ 371
Stocksii, *Hk. f. & T.* „ 370
Wallichii, *DC.* „ 370

Vol. Page
ERIOLÆNEÆ ... i. 353
Eriopetalum attenuatum, Wight ... iv. 65
  lævigatum, Wight ... „ 65
  parviflorum, Wight ... „ 65
Eriophorum, *Linn.* ... vi. 663
  arundinaceum, Wall. ... „ 664
  cannabinum, Royle ... „ 664
  capitatum, Host ... „ 664
  comosum, *Wall.* ... „ 664
  cyperinum, Linn. ... „ 661
  filamentosum, Boeck. ... „ 664
  humile, Turcz. ... „ 664
  microstachyum, *Boeck.* ... „ 664
  Scheuchzeri, *Hoppe* ... „ 664
  vaginatum, Curt. ... „ 664
  sp., Benth. ... „ 661
  sp., Wall. ... „ 664
Eriophyton, *Benth.* ... iv. 695
  Wallichianum, *Benth.* ... „ 695
Eriosema, *DC.* ... ii. 219
  chinense, *Vogel* ... „ 219
Eriosolena montana, Bl. ... v. 194
  Wallichii, Meissn. ... „ 193
Eriostemon taraxacifolium, Less. ... iii. 370
Erismanthus, *Wall.* ... v. 405
  obliqua, *Wall.* ... „ 405
Eritrichium, *Schrad.* ... iv. 163
  basifixum, *Clarke* ... „ 165
  elongatum, A. DC. ... „ 170
  fruticulosum, Klotz. ... „ 164
  Jacquemontii, Dcne. ... „ 164
  longifolium, Dcne. ... „ 164
  microcarpum, DC. ... „ 172
  multicaule, DC. ... „ 172
  Munroi, *Clarke* ... „ 165
  nemorosum, A. DC. ... „ 171
  ovalifolium, DC. ... „ 172
  patens, Dcne. ... „ 164
  primuloides, Dcne. ... „ 170
  pustulosum, *Clarke* ... „ 164
  pygmæum, *Clarke* ... „ 165
  rotundifolium, DC. ... „ 172
  secundiflorum, A. DC. ... „ 170
  spathulatum, *Clarke* ... „ 164
  strictum, *Dcne.* ... „ 164
  tibeticum, *Clarke* ... „ 165
  villosum, DC. ... „ 165
  sp., Hk. f. & T. ... iv. 164, 165
Eriura, Lindl. ... v. 785
Erodium, *L'Hérit.* ... i. 433
  ægyptiacum, Boiss. ... „ 435
  chium, Sibth. ... „ 435
  chumbalense, Munro ... „ 427
  ciconium, *Willd.* ... „ 434
  cicutarium, *Leman* ... „ 434

Erodium Vol. Page
  himalayanum, Royle ... i. 434
  malacoides, *Willd.* ... „ 435
  nilagiricum, Schlecht. ... „ 435
  Stephanianum, *Willd.* ... „ 434
  stipaceum, *Edgew.* ... „ 435
  tibetanum, *Edgew.* ... „ 434
  violæfolium, *Turcz.* ... „ 435
Erophila, *DC.* ... i. 144
  vulgaris, *DC.* ... „ 145
Eruca, *Tourn.* ... i. 158
  sativa, *Lamk.* ... „ 158
Ervum filiforme, Roxb. ... ii. 177
  hirsutum, Linn. ... „ 177
  Lens, *Linn.* ... „ 179
  Lens, Wall. ... „ 177
  tetraspermum, Linn. ... „ 177
ERYTHROXYLEÆ ... i. 410
Erycala, G. Don ... iv. 110
Erycibe, *Roxb.* ... iv. 180
  camptobotrya, Miq. ... „ 182
  citriniflora, Griff. ... „ 183
  coriacea, *Wall.* ... „ 182
  expansa, *Wall.* ... „ 181
  ferruginosa, Griff. ... „ 181
  fragrans, Wall. ... „ 183
  glaucescens, *Wall.* ... „ 181
  glaucescens, DC. ... „ 181
  glaucescens, Kurz ... „ 181
  glomerata, *Wall.* ... „ 183
  glomerata, Bl. ... „ 183
  Griffithii, *Clarke* ... „ 182
  lævigata, *Wall.* ... „ 181
  lævigata, Wall. ... „ 181
  Maingayi, *Clarke* ... „ 182
  malaccensis, *Clarke* ... „ 182
  paniculata, *Roxb.* ... „ 180
  Princei, *Wall.* ... „ 182
  Rheedii, Bl. ... „ 181
  subspicata, *Wall.* ... „ 181
  Wightiana, Grah. ... „ 181
  sp., Hk. f. & T. ... „ 182
Eryngium, *Linn.* ... ii. 669
  Billardieri, *Delar.* ... „ 670
  cærulescens, Jacq. ... „ 670
  cæruleum, *Bieb.* ... „ 669
  dichotomum, Desf. ... „ 670
  Heldreichii, Boiss. ... „ 670
  Kotschyi, Boiss. ... „ 670
  planum, Lindl. ... „ 669
Erysimum, *Linn.* ... i. 152
  Alliaria, Linn. ... „ 151
  altaicum, *C. A. Mey.* ... „ 154
  deflexum, *Hk. f. & T.* ... „ 153
  funiculosum, *Hk. f. & T.* ... „ 153
  gracile, J. Gay ... „ 153
  Griffithii, Boiss. ... „ 153
  hieraciifolium, *Linn.* ... „ 153

Erysimum ... Vol. Page
odoratum, *Ehrh.?* ... ... ii. 154
longisiliquum, *Hk. f. & T.* „ 154
pachycarpum, *Hk. f. & T.* „ 153
patens, J. Gay ... ... „ 153
planisiliquum, Led. ... „ 152
repandum, *Linn.* ... ... „ 153
robustum, D. Don ... ... „ 153
strictum, Gærtn. ... ... „ 153
Thomsoni, *Hk. f.* ... ... „ 154
Erythracanthus elongatus, Dalz. & Gibs. ... ... iv. 397
elongatus, Nees ... ... „ 400
Griffithianus, Nees ... ... „ 400
obtusus, Nees ... ... „ 401
obtusus, Wight ... ... „ 400
racemosus, Nees ... ... „ 401
Erythræa, *L. C. Rich.* ... ... iv. 101
altaica, Griseb. ... ... „ 102
babylonica, *Griseb.* ... ... „ 102
caspica, Griseb. ... ... „ 101
latifolia, Griseb. ... ... „ 101
latifolia, Sm. ... ... „ 101
linearifolia, Clarke ... ... „ 102
Meyeri, *Bunge* ... ... „ 102
microphylla, Benth. ... ... „ 99
pulchella, Hornem. ... ... „ 101
ramosissima, *Pers.* ... ... „ 101
ramosissima, Clarke ... „ 102
ramosissima, Griseb. ... „ 102
Roxburghii, *G. Don* ... „ 102
spicata, Pers. ... ... „ 102
tenuiflora, Link ... ... „ 101
sp., Clarke ... ... „ 101
Erythrina, *Linn.* ... ... ii. 188
alba, Roxb. ... ... „ 190
arborescens, *Roxb.* ... ... „ 190
corallodendron, Linn. ... „ 188
cuneata, Grah. ... ... „ 188
holosericea, Kurz ... ... „ 190
indica, *Lam.* ... ... „ 188
lithosperma, *Bl.* ... ... „ 190
maxima, Roxb. ... ... „ 190
monosperma, Lamk. ... ... „ 194
Nahasuta, Ham. ... ... „ 190
ovalifolia, *Roxb.* ... ... „ 189
picta, Linn. ... ... „ 189
picta, Wall. ... ... „ 189
reniformis, Ham. ... ... „ 190
resupinata, *Roxb.* ... ... „ 189
secundiflora, Hassk. ... „ 190
spathacea, Wall. ... ... „ 188
stricta, *Roxb.* ... ... „ 189
suberosa, *Roxb.* ... ... „ 189
sublobata, Roxb. ... ... „ 190
sumatrana, Miq. ... ... „ 190
tomentosa, Ham. ... ... „ 190
Erythrocarpus glomerulatus, Bl. v. 460
Erythrochilus indicus, Reinw. v. 410
longifolius, Bl. ... ... „ 411
mollis, Bl. ... ... „ 410
Erythrochiton Wallichianum, Griff. ... ... i. 281
Erythrogyne frutescens, Vis. v. 529
Erythronium indicum, Hb. Madr. ... ... vi. 348
Erythropalum, *Bl.* ... ... i. 578
populifolium, *Mast.*, i. 578, ii. 600
scandens, *Bl.* ... ... i. 578
vagum, *Mast.* ... ... „ 578
Erythropsis Roxburghiana, Schott & Endl. ... ... i. 360
Erythrorchis altissima, Bl. ... vi. 89
altissima, Lindl. ... ... „ 89
Lindleyana, Rchb. f. ... „ 88
Erythrospermum, *Lam.* ... i. 191
phytolaccoides, *Gard.* ... „ 191
Erythrotis Beddomei, Hk. f. vi. 388
Erythroxylon, *Linn.* ... ... i. 414
burmanicum, *Griff.* ... „ 414
indicum, Bedd. ... ... „ 414
Kunthianum, *Wall.* ... „ 414
? *Kunthianum*, Kurz ... „ 414
lanceolatum, *Hk. f.* ... ... „ 415
lucidum, *Moon* ... ... „ 415
monogynum, *Roxb.* ... ... „ 414
obtusifolium, *Thw.* ... ... „ 415
retusum, Bauer ... ... „ 415
sideroxyloides, *Lam.* ... „ 415
sumatranum, Miq. ... ... „ 415
Br. ... ... v. 489
ESCALLONIEÆ ... ... ii. 389
Esmeralda Cathcartii, Rchb. f. vi. 27
Clarkei, Rchb. f. ... ... „ 28
Etæria abbreviata, Lindl. ... vi. 109
affinis, Lindl. ... ... „ 109
albida, Bl. ... ... „ 97
flava, Lindl. ... ... „ 108
flava, Wall. ... ... „ 109
javanica, Bl. ... ... „ 97
lanceolata, Rchb. f. ... ... „ 109
moulmeinensis, Par. & Rchb. f. ... ... „ 109
nervosa, Lindl. ... ... „ 108
pusilla, Wall. ... ... „ 105
Ethulia, *Linn.* ... ... iii. 226
angustifolia, Bojer ... ... „ 227
conyzoides, *Linn.* ... ... „ 227
divaricata, Linn. ... ... „ 274
divaricata, Wall. ... ... „ 248
gracilis, Delile ... ... „ 227
integrifolia, D. Don ... ... „ 245
ramosa, Roxb. ... ... „ 227
sp., Grah. ... ... „ 229
EUASCLEPIADEÆ ... ... iv. 2

Vol. Page
EUBALANOPHOREÆ ... v. 236
EUCÆSALPINIEÆ ... ii. 60
EUCHENOPODIEÆ ... v. 1
Euchresta, *Benn.* ... ii. 248
  Horsfieldii, *Benn.* ... „ 248
Euclidium, *Br.* ... i. 164
  syriacum, *Br.* ... „ 165
EUCYPEREÆ ... vi. 586
Eugeissonia, *Griff.* ... vi. 480
  tristis, *Griff.* ... „ 481
Eugenia, *Linn.* ... ii. 470
  acuminatissima, *Kurz* ... „ 483
  acutangula, Linn. ... „ 508
  alba, Roxb. ... „ 474
  albiflora, *Duthie* ... „ 479
  alternifolia, *Wight* ... „ 497
  amœna, *Thw.* ... „ 505
  amplexicaulis, *Roxb.* ... „ 471
  androsæmoides, Bedd. ... „ 491
  androsæmoides, Wight ... „ 491
  angustifolia, Roxb. ... „ 472
  anisosepala, *Duthie* ... „ 481
  aquea, *Burm.* ... „ 473
  areolata, *Duthie* ... „ 490
  argentea, *Bedd.* ... „ 503
  Arnottiana, *Wight* ... „ 483
  assimilis, *Bedd.* ... „ 493
  balsamea, *Wight* ... „ 499
  Beddomei, *Duthie* ... „ 476
  Benthamiana, Wight ... „ 484
  bifaria, *Wall.* ... „ 478
  bifaria, Colebr. ... „ 475
  borneensis, Miq. ... „ 484
  brachiata, *Roxb.* ... „ 496
  bracteata, *Roxb.* ... „ 502
  bracteolata, *Wight* ... „ 488
  buxifolia, Lam. ... „ 501
  calcadensis, *Bedd.* ... „ 502
  calophyllifolia, *Wight* „ 494
  calyptrata, Roxb. ... „ 499
  capillaris, Wall. ... „ 478
  ? *capitellata*, Arn. ... „ 553
  caryophyllæa, *Wight* ... „ 490
  caryophyllata, Willd. ... „ 506
  caryophyllifolia, Lam. ... „ 499
  cerasiflora, Kurz ... „ 478
  cerasoides, Roxb. ... „ 498
  chlorantha, *Duthie* ... „ 487
  cinerea, Kurz ... „ 496
  claviflora, *Roxb.* ... „ 484
  codyensis, *Munro* ... „ 501
  colorata, *Duthie* ... „ 492
  comosa, Wall. ... „ 492
  concinna, Thw. ... „ 506
  concinna, Wall. ... „ 482
  conglomerata, *Duthie* .. „ 497
  contracta, Wall. ... „ 485

Eugenia Vol. Page
  cordifolia, *Wight* ... ii. 491
  corymbosa, Lam. ... „ 490
  corymbosa, Roxb. ... „ 473
  corymbosa, Wall. ... „ 487
  cotinifolia, Jacq. ... „ 501
  crenulata, *Duthie* ... „ 490
  cuneata, *Wall.* ... „ 495
  cuneata, Heyne ... „ 500
  cuneata, Duthie ... „ 485
  cuspidata, Wall. ... „ 470
  cyclophylla, *Duthie* ... „ 494
  cylindrica, *Wight* ... „ 479
  cymosa, *Lam.* ... „ 482
  cymosa, Roxb. ... „ 476
  decora, *Thw.* ... „ 504
  decora, Wall. ... „ 475
  densiflora, *DC.* ... „ 473
  diospyrifolia, *Wall.* ... „ 472
  elliptica, Lam. ... „ 501
  elliptica, Wall. ... „ 489
  expansa, *Duthie* ... „ 491
  fasciculata, Wall. ... „ 502
  ferruginea, Wight ... „ 482
  ficifolia, Wall. ... „ 476
  filiformis, *Wall.* ... „ 478
  firma, Wall. ... „ 476
  floccifera, *Thw.* ... „ 504
  floccosa, *Bedd.* ... „ 501
  formosa, *Wall.* ... „ 471
  frondosa, *Wall.* ... „ 490
  frondosa, Wall. ... „ 499
  fruticosa, *Roxb.* ... „ 499
  fulva, *Thw.* ... „ 504
  fusiformis, *Duthie* ... „ 479
  Gardneri, *Bedd.* ... „ 489
  glandulifera, Roxb. ... „ 485
  gracilis, Bedd. ... „ 505
  grandis, *Wight* ... „ 475
  grata, *Wight* ... „ 486
  Griffithii, *Duthie* ... „ 481
  Helferi, *Duthie* ... „ 480
  hemispherica, *Wight* ... „ 477
  Heyneana, *Duthie* ... „ 500
  Heyneana, Rottl. ... „ 500
  hypoleuca, Thw. ... „ 501
  inophylla, *Roxb.* ... „ 480
  insignis, *Thw.* ... „ 504
  Jambolana, *Lam.* ... „ 499
  Jambos, *Linn.* ... „ 474
  javanica, *Lamk.* ... „ 474
  javanica, Lam. ... „ 473
  Jossinia, *Duthie* ... „ 500
  khasiana, *Duthie* ... „ 491
  Kurzii, *Duthie* ... „ 478
  læta, *Ham.* ... „ 479
  lævicaulis, *Duthie* ... „ 492
  lanceæfolia, Roxb. ... „ 475

Eugenia Vol. Page
lanceolaria, *Roxb.* ... ... ii. 477
lanceolata, Lam. ... ... „ 485
laurifolia, Roxb. ... ... „ 478
laurina, Willd.... ... ... iii. 573
lepidocarpa, *Wall.* ... ... ii. 476
leptantha, *Wight* ... ... „ 484
linearis, *Duthie* ... ... „ 486
lineata, *Duthie* ... ... „ 487
lissophylla, *Bedd.* ... ... „ 488
lucida, *Lam.* ... ... „ 501
lucidula, Miq. ... ... „ 496
mabæoides, *Wight* ... ... „ 505
macrocarpa, *Roxb.* ... ... „ 474
macrophylla, Lam. ... ... „ 471
macrosepala, *Duthie* ... „ 501
Maingayi, *Duthie* ... ... „ 484
malabarica, *Bedd.* ... ... „ 497
malaccensis, *Linn.* ... ... „ 471
mangifolia, *Wall.* ... ... „ 480
micrantha, *Bedd.* ... ... „ 483
microcalyx, *Duthie* .. ... „ 493
microphylla, *Bedd.* ... ... „ 505
Mooniana, *Wight* ... ... „ 505
Mooniana, Wight ... ... „ 505
Moorei, F. Muell. ... ... „ 499
montana, *Wight* ... ... „ 488
Munronii, *Wight* ... ... „ 472
myrtifolia, *Roxb.* ... ... „ 483
Neesiana, *Wight* ... ... „ 493
nigrescens, Poir. ... ... „ 482
nitida, *Duthie* ... ... „ 496
oblata, *Roxb.* ... ... „ 492
oblongifolia, *Duthie* ... „ 491
obovata, Wall. ... ... „ 491
obtusifolia, Roxb. ... ... „ 500
occlusa, *Kurz* ... ... „ 498
octopetala, Ham. ... ... „ 482
? *odorata*, Wight ... ... „ 496
oleina, Wight ... ... „ 483
oligantha, *Bedd.* ... ... „ 494
olivifolia, *Duthie* ... ... „ 495
operculata, *Roxb.* ... ... „ 498
pachyphylla, *Kurz* ... ... „ 477
Paniala, Roxb. ... ... „ 498
papillosa, *Duthie* ... ... „ 495
pauciflora, Wight ... ... „ 479
pellucida, *Duthie* ... ... „ 485
penangiana, *Duthie* ... „ 486
pendens, *Duthie* ... ... „ 475
polyantha, *Wight* ... ii. 496, 498
polygama, Roxb. ... ... ii. 470
polypetala, *Wight* ... ... „ 472
præcox, Roxb. ... ... „ 475
pulchella, Roxb. ... ... „ 506
purpurea, Roxb. ... ... „ 472
pustulata, *Duthie* ... ... „ 495
pyrifolia, *Duthie* ... ... „ 487

Eugenia Vol. Page
racemosa, Linn. ... ... ii. 507
ramosissima, *Wall.*... ... „ 480
reticulata, Wight ... ... „ 480
revoluta, *Wight* ... ... „ 492
rhodomelea, Comm. ... ... „ 482
rivulorum, *Thw.* ... ... „ 504
rostrata, Bedd. ... ... „ 482
Rottleriana, *W. & A.* ... „ 502
rotundifolia, *Wight* ... „ 494
Roxburghiana, Wall. ... „ 475
Roxburghii, DC. ... ... „ 502
rubens, *Roxb.* ... . „ 482
rubicunda, *Wight* ... ... „ 495
rubicunda, W. & A. ... „ 500
rubricaulis, *Duthie* ... ... „ 487
rufo-fulva, *Thw.* ... ... „ 503
salicifolia, Buch. ... ... „ 472
salicifolia, Grah. ... ... „ 500
salicifolia, Wall. ... ... „ 500
salicifolia, Wight ... ... „ 500
scabrida, Wall. ... ... „ 486
sclerophylla, *Bedd.* ... ... „ 494
scoparia, *Duthie* ... ... „ 489
singampattiana, *Bedd.* ... „ 506
skiophila, *Duthie* ... ... „ 486
spicata, Lam. ... ... „ 485
Stocksii, *Duthie* ... ... „ 498
subavenis, *Duthie* ... ... „ 489
subdecussata, *Duthie* ... „ 491
sylvestris, *Moon* ... ... „ 493
tenuis, *Duthie* ... ... „ 500
ternifolia, Roxb. ... ... „ 471
terpnophylla, *Thw.* ... „ 503
tetraëdra, *Duthie* ... ... „ 476
tetragona, *Wight* ... ... „ 497
Thumra, *Roxb.* ... ... „ 481
Thwaitesii, *Duthie* ... ... „ 506
toddalioides, *Wight* ... ... „ 482
? *trinervia*, DC. ... ... „ 468
tristis, *Kurz* ... ... „ 477
tumida, *Duthie* ... ... „ 487
umbrosa, Thw. ... ... „ 489
uniflora, Linn. ... ... „ 505
valdevenosa, *Duthie* ... „ 489
venulosa, *Duthie* ... ... „ 490
venusta, *Roxb.* ... ... „ 488
verecunda, *Duthie* ... ... „ 496
Wallichii, *Wight* ... ... „ 475
Wightiana, *Wight* ... ... „ 485
Wightii, Bedd. ... . „ 479
Willdenowii, DC. ... ... „ 505
Willdenowii, Wight ... „ 502
wynaadensis, *Bedd.* ... „ 506
xanthocarpa, *Thw.* ... ... „ 503
zeylanica, *Wight* ... ... „ 485
zeylanica, Roxb. ... ... „ 502
zeylanica, Willd. ... ... „ 505

Eugenia — Vol. Page
- *sp.*, Griff. ii. 506

Eugona superba, Salisb. vi. 358

Eulalia argentea, Brongn. vii. 112
- *concinna*, Nees „ 109
- *cotulifera*, Munro „ 108
- *japonica*, Trin. „ 118
- *mollis*, Munro „ 111
- *nepalensis*, Trin. „ 107

EULINEÆ i. 410

EULOGANIEÆ iv. 78

Eulophia, *Br.* vi. 1, 177, 178, 195
- *albiflora*, Edgew. vi. 2
- **andamanensis**, *Rchb. f.* „ 8
- *atro-virens*, Lindl. „ 8
- **bicarinata**, *Hk. f.* „ 6
- *bicolor*, Dalz. „ 6
- *brachypetala*, Lindl. „ 2
- **bracteosa**, *Lindl.* „ 3
- **burmanica**, *Hk. f.* „ 5
- **campestris**, *Wall.* „ 4
- **candida**, *Hk. f.* „ 6
- *carinata*, Lindl. „ 1
- **decipiens**, *Kurz* vi. 5, 195
- **densiflora**, *Lindl.* vi. 5
- **elata**, *Hk. f.* „ 3
- **explanata**, *Lindl.* vi. 3, 195
- **flava**, *Hk. f.* vi. 7
- **graminea**, *Lindl.* vi. 2, 196
- *grandiflora*, Lindl. vi. 3
- *hastata*, Lindl. v. 821
- *hemileuca*, Lindl. vi. 4
- **herbacea**, *Lindl.* „ 2
- **holochila**, *Coll. & Hemsl.* „ 196
- *inconspicua*, Griff. „ 2
- **lachnocheila**, *Hk. f.* „ 2
- **macrobulbon**, *Par. & Rchb. f.* „ 7
- **macrorhizon**, *Hk. f.* „ 7
- **macrostachya**, *Lindl.* „ 4
- *maculata*, Rchb. f. „ 8
- **Mannii**, *Hk. f.* „ 4
- *monophylla*, Sp. Moore „ 8
- **nuda**, *Lindl.* „ 5
- **obtusa**, *Hk. f.* „ 3
- **ochreata**, *Lindl.* „ 2
- **pratensis**, *Lindl.* „ 4
- *promensis*, Lindl. v. 820
- *ramentacea*, Lindl. vi. 4
- *ramentacea*, Wight „ 4
- *rupestris*, Lindl. „ 4
- **sanguinea**, *Hk. f.* vi. 8, 196
- **squalida**, *Lindl.* vi. 6, 196
- **stenopetala**, *Lindl.* vi. 5
- **virens**, *Br.* vi. 1, 198
- *sp.*, Trim. vi. 8, 196

EUMYRSINEÆ iii. 507

Euonymus, *Linn.* i. 607
- *acutangulus*, Wight „ 610

Euonymus — Vol. Page
- **angulatus**, *Wight* i. 610
- *atropurpureus*, Roxb. „ 612
- **attenuatus**, *Wall.* „ 610
- **bullatus**, *Wall.* „ 610
- **calocarpus**, *Kurz* „ 609
- *capillaceus*, Wall. „ 614
- **cinereus**, *Laws.* „ 611
- **crenulatus**, *Wall.* „ 608
- **dichotomus**, *Heyne* „ 609
- **echinatus**, *Wall.* „ 611
- *filiformis*, Wall. „ 614
- **fimbriatus**, *Wall.* „ 611
- **frigidus**, *Wall.* „ 611
- *garcinifolius*, Roxb. „ 614
- **glaber**, *Roxb.* „ 609
- *glaucus*, Turcz. „ 610
- *Goughii*, Wight „ 608
- **grandiflorus**, *Wall.* „ 608
- **Griffithii**, *Kurz* „ 611
- *grossa*, Wall. „ 623
- **Hamiltonianus**, *Wall.* „ 612
- **indicus**, *Heyne* „ 608
- *japonicus*, Wall. „ 612
- **javanicus**, *Bl.* „ 607
- *lacerus*, Ham. „ 608
- ? *læta*, Wall. „ 614
- *lucidus*, D. Don „ 612
- ? *micranthus*, D. Don „ 611
- **nitidus**, *Benth.* „ 610
- *ovatus*, Wall. „ 615
- **paniculatus**, *Wight* „ 609
- **pendulus**, *Wall.* „ 612
- *pterocladus*, Hohen. „ 610
- *punctatus*, Wall. „ 610
- **revolutus**, *Wight* „ 608
- *scandens*, Grah. „ 611
- **serratifolius**, *Bedd.* „ 609
- ? *serrulatus*, Wall. „ 609
- *sphærocarpus*, Hassk. „ 607
- *sumatranus*, Miq. „ 607
- **theæfolius**, *Wall.* „ 612
- **Thwaitesii**, *Laws.* „ 608
- **timorensis**, *Zipp.* „ 610
- *Tina*, Ham. „ 623
- **tingens**, *Wall.* „ 610
- **vagans**, *Wall.* „ 611
- *vagans*, Wall. „ 611
- **Walkeri**, *Wight* „ 608
- *zeylanicus*, Moon „ 608
- *sp.*, Bedd. „ 542
- *sp.*, Wall. „ 610

EUPATORIEÆ iii. 220, 242

Eupatorium, *Linn.* iii. 243
- *asperum*, Roxb. „ 233
- *Ayapana*, Vent. „ 244
- *birmanicum*, DC. „ 244
- *candicans*, Wall. „ 386

Eupatorium Vol. Page
  cannabinum, *Linn.* ... ... iii. 243
  celebicum, Bl. ... ... „ 239
  dicline, Edgew. ... ... „ 244
  divergens, Roxb. ... ... „ 234
  erigeroides, DC. ... ... „ 244
  Finlaysonianum, Wall. ... „ 244
  glabrum, Wall. ... ... „ 259
  heterophyllum, DC. ... ... „ 243
  javanicum, Bl. ... ... „ 239
  Lambertianum, Wall. ... „ 244
  longicaule, DC. ... ... „ 244
  longicaule, Wall. ... iii. 235, 243
  menthæfolium, Wall. ... iii. 235
  nodiflorum, Wall. ... ... „ 243
  odoratum, Linn. ... ... „ 244
  pectinatum, Wall. ... ... „ 241
  polyanthum, Wall. iii. 234, 244
  punduanum, Wall. ... ... iii. 243
  pyramidale, D. Don ... „ 233
  Reevesii, *Wall.* ... ... „ 243
  rigidum, Wall. ... ... „ 230
  scandens, Linn. ... ... „ 244
  Simonsii, Clarke ... ... „ 244
  spectabile, Spreng. ... ... „ 386
  squamosum, D. Don ... „ 243
  suaveolens, Wall. ... ... „ 244
  versicolor, Wall. ... ... „ 234
  viscosum, Wall. ... ... „ 244
  Wallichii, DC. ... ... „ 243
  zeylanicum, Linn. ... ... „ 238
Euphœbe umbelliflora, Bl. ... v. 145
Euphora exstipulatis, Griff. i. 557, 690
Euphorbia, *Linn.* ... ... v. 244
  acaulis, Roxb. ... ... „ 257
  ægyptiaca, Boiss. ... ... „ 252
  agraria, Bieb. ... ... „ 265
  androsæmoides, Dennst.... „ 249
  angustifolia, *Ham.* ... ... „ 265
  antiquorum, *Linn.* ... ... „ 255
  ? *antiquorum*, Wall. ... „ 255
  Apios, Linn. ... ... „ 261
  ? *arborescens*, Roxb. ... „ 256
  arillata, Edgew. ... ... „ 252
  articulata, Dennst. ... ... „ 248
  Atoto, *Forst.* ... ... „ 248
  ? *auricularia*, Boiss. ... „ 251
  bifida, Thw. ... ... „ 248
  bracteolaris, Boiss. v. 249, 250
  burmanica, *Hk. f.* ... ... v. 254
  burmanniana, J. Gay ... „ 252
  calliadena, Engelm. ... „ 265
  capitata, Ham. ... ... „ 247
  capitata, Wall. ... ... „ 251
  ? *cashmeriana*, Royle ... „ 261
  cassioides, Presl ... ... „ 249
  Cattimandoo, W. Elliot ... „ 256
  ? *Chamæsyce*, Roxb. ... „ 253

Euphorbia Vol. Page
  Clarkeana, *Hk. f.* ... ... v. 253
  coccinea, *Roth* ... ... „ 248
  cognata, Boiss. ... ... „ 261
  consanguinea, Klotz. ... „ 261
  cornigera, Boiss. ... ... „ 261
  corrigioloides, *Boiss.* ... „ 251
  cristata, *Heyne* ... ... „ 247
  cuneifolia, Roxb. ... ... „ 264
  decumbens, Willd. ... ... „ 249
  ? *dichotoma*, Roxb. ... ... „ 246
  ? *disticha*, Engelm. ... „ 251
  divergens, Klotz. ... ... „ 264
  dracunculoides, *Lamk.* ... „ 262
  dulcis, Linn. ... ... „ 261
  Edgeworthii, *Boiss.* ... „ 261
  elegans, *Spreng.* ... ... „ 246
  elegans, Heyne ... ... „ 247
  Emodi, *Hk. f.* ... ... „ 250
  epiphylloides, *Kurz* ... „ 254
  erythroclada, *Boiss.* ... „ 247
  falcata, *Linn.* ... ... „ 263
  fimbriata, Heyne ... ... „ 247
  fimbriata, Wall. ... ... „ 262
  foliata, Ham. ... ... „ 252
  Forskalii, J. Gay ... ... „ 252
  fragilis, Dcne. ... ... „ 252
  fusiformis, *Ham.* ... ... „ 257
  galioides, Boiss. ... ... „ 253
  geniculata, Orteg. ... v. 239, 266
  glauca, Roxb. ... ... v. 264
  graminea, Kœn. ... ... „ 264
  granulata, *Forsk.* ... ... „ 252
  granulata, Royle ... ... „ 253
  Griffithii, *Hk. f.* ... ... „ 259
  halophila, Miq. ... ... „ 248
  helioscopia, *Linn.* ... ... „ 262
  ? *Heyneana*, Boiss. ... ... „ 253
  Heyneana, Spreng. ... ... „ 253
  himalayensis, *Boiss.* ... „ 258
  himalayensis, Klotz. ... „ 258
  hirta, Linn. ... ... „ 251
  hispida, *Boiss.* ... ... „ 265
  hypericifolia, *Linn.* ... „ 249
  hypericifolia, Boiss. ... „ 250
  iberica, Boiss. ... ... „ 265
  inæquilatera, Sonder ... „ 265
  indica, Aitch. & Hemsl. „ 250
  indica, Boiss. ... ... „ 250
  indica, Lamk. ... ... „ 249
  indica, Wall. ... ... „ 251
  involucrata, Wall. ... ... „ 258
  Jacquemontii, *Boiss.* ... „ 258
  kanaorica, *Boiss.* ... ... „ 264
  khasyana, *Boiss.* ... ... „ 262
  læta, Heyne ... ... „ 264
  lævigata, Vahl ... ... „ 248
  lævigata, ? Wall. ... ... „ 248

Euphorbia Vol. Page
lævis, Poir. ... v. 248
lanceolaria, Heyne ... „ 264
lanceolata, Heyne ... „ 263
ligularia, Roxb. ... „ 255
linearifolia, *Roth* ... „ 249
linearis, Heyne ... „ 249
linifolia, Russell ... „ 264
longifolia, *D. Don* ... „ 261
longistyla, *Boiss.* ... „ 247
maculata, Aubl. ... „ 252
Maddeni, *Boiss.* ... „ 263
micractina, *Boiss.* ... „ 261
microphylla, *Heyne* v. 252, 266
myrtifolia, Edgew. ... v. 261
nana, Royle ... „ 257
nepalensis, Boiss. ... „ 264
nereifolia, Roxb. ... „ 255
neriifolia, *Linn.* ... „ 255
nilaghirica, *Miq.* ... „ 265
Nivulia, *Ham.* ... „ 255
notoptera, *Boiss.* ... „ 247
oligantha, Boiss. ... „ 246
orbiculata, Miq. ... „ 253
oreophila, Miq. ... „ 264
pallens, Dillw. ... „ 248
papilligera, Boiss. ... „ 249
parviflora, Boiss. ... „ 250
parviflora, Lamk. ... „ 251
parviflora, Linn. ... „ 249
peltata, *Roxb.* ... „ 262
pentagona, Royle ... „ 257
Peplus, Linn. ... „ 266
pilosa, *Linn.* ... „ 260
pilulifera, *Linn.* ... „ 250
platylepis, Dcne. ... „ 246
procera, Bieb. ... „ 260
prolifera, *Ham.* ... „ 264
prostrata, Ait. ... „ 266
prostrata, Grah. ... „ 252
prostrata, Torr. ... „ 253
prunifolia, Jacq. ... v. 239, 266
pycnostegia, *Boiss.* ... v. 246
pyrifolia, Lamk. ... „ 266
rhipsaloides, Lem. ... „ 254
rosea, *Retz.* ... „ 251
Rothiana, *Spreng.* ... „ 263
Royleana, *Boiss.* ... „ 257
rubicunda, Bl. ... „ 252
sanguinea, Hochst. & Steud. „ 253
satureioides, Lamk. ... „ 251
? *segetalis*, Grah. ... „ 264
serpens, Engelm. ... „ 253
serpens, Kunth ... „ 253
sessiliflora, *Roxb.* ... „ 257
sikkimensis, *Boiss.* ... „ 259
sikkimensis, Boiss. ... „ 259
Stracheyi, *Boiss.* ... „ 259

Euphorbia Vol. Page
strobilifera, Dalz. ... v. 246
tenuis, *Ham.* ... „ 266
Thomsoniana, *Boiss.* ... „ 260
thymifolia, *Burm.* ... „ 252
thymifolia, Wall. ... v. 251, 252, 253, 254
thyrsoidea, *Boiss.* ... v. 265
tibetica, *Boiss.* ... „ 260
Tirucalli, *Linn.* ... „ 254
tortilis, *Rottl.* ... „ 256
trigona, *Haw.* ... „ 256
uniflora, *Roxb.* ... „ 266
uniflora, Dalz. & Gibs. ... „ 253
uniflora, Roxb. ... „ 254
uniflora, Wall. ... „ 263
varians, Haw. ... „ 255
variegata, Heyne ... „ 246
villosa, Royle ... „ 252
viminalis, Mill. ... „ 254
Wallichiana, Boiss. ... „ 253
Wallichii, *Hk. f.* ... „ 258
Wightiana, *Hk. f.* ... „ 248
Wightiana, Boiss. ... „ 264
zornioides, *Boiss.* ... „ 246
sp., Aitch. ... „ 258
sp., Griff. ... „ 259
sp., Str. & Wint. ... v. 260, 263
sp., Wall. ... v. 248, 249, 256, 259, 262, 264, 432, 440
EUPHORBIACEÆ ... v. 239
EUPHORBIEÆ ... v. 240
Euphoria attenuata, Planch. i. 684, 690
Danura, Wall. ... i. 684, 690
fuscata, Benth. & Hk. f. i. 682, 690
Gardneri, Benth. & Hk. f. i. 690
glabra, Bl. ... „ 687
Litchi, Juss. ... „ 688
Litchi, Wall. ... i. 688, 690
Longana, Bl. ... i. 686
Longana, Lamk. ... „ 689
Nephelium, DC. ... „ 687
Nephelium, Wall. ... „ 690
Noronhiana, Bl. ... i. 686, 690
punicea, Lamk. ... i. 687
pupillum, Steud. ... „ 689
rimosa, Royle ... „ 690
rubra, Royle ... i. 684, 690
undulata, Heyne ... i. 689
verticillata, Lindl. ... i. 684, 690
verticillata, Wall. ... i. 684, 690
xerocarpa, Bl. ... i. 686, 690
sp., Wall. ... i. 686, 690
Euphrasia, *Linn.* ... iv. 304
coromandeliana, Roth ... „ 302
depauperata, Benth. ... „ 305
? *glandulosa*, Benth. ... „ 304
Odontites, Linn. ... „ 305

Euphrasia ... Vol. Page
officinalis, *Linn.* ... iv. 305
rubra, Pers. ... „ 305
simplex, D. Don ... „ 305
tartarica, Fisch. ... „ 305
EUPHRASIEÆ ... iv. 249, 304
EUPODOSTEMEÆ ... v. 62
EUPOLYGONEÆ ... v. 22
Euproboscis pygmæa, Griff. vi. 86
Euptelea, *Sieb. & Zucc.* ... i. 39
pleiosperma, *Hk. f. & T.* „ 39
Eupteron acuminatum, Miq. ii. 727
sp., Kurz ... „ 734
Eupyrena glabra, W. & A. ... iii. 127
Eurotia, *Adans* ... v. 8
ceratoides, *C. A. Mey.* ... „ 8
Eurya, *Thunb.* ... i. 284
acuminata, *DC.* ... „ 285
acuminata, Royle ... „ 285
acuminata, Wall. ... „ 285
angustifolia, Miq. ... „ 292
angustifolia, Wall. ... „ 285
bifaria, Wall. ... „ 285
ceylanica, Wight ... „ 285
chinensis, *Br.* ... „ 285
chinensis, Hk. f. & T. ... „ 285
coneocarpa, Korth. ... „ 284
elliptica, Gard. ... „ 284
euprista, Korth. ... „ 285
fasciculata, Ham. ... „ 285
fasciculata, Wall. ... „ 284
japonica, *Thunb.* ... „ 284
japonica, Bedd. ... „ 284
lasiopetala, Gardn. ... „ 283
lucida, Wall. ... „ 285
membranacea, Gardn. ... „ 285
multiflora, DC. ... „ 285
nitida, Korth. ... „ 284
parvifolia, Gardn. ... „ 285
phyllanthoides, Bl. ... „ 284
Roxburghii, Wall. ... „ 284
salicifolia, Bl. ... „ 285
serrata, Bl. ... „ 285
symplocina, *Bl.* ... „ 284
systyla, Miq. ... „ 284
trichocarpa, *Korth.* ... „ 285
trichogyna, Bl. ... „ 285
tristyla, W. & A. ... „ 284
vitiensis, A. Gray ... „ 284
Wallichiana, Planch. ... „ 285
Wallichiana, Steud. ... „ 285
Wightiana, Wight ... „ 284
Wightiana, Wall. ... „ 284
Euryale, *Salisb.* ... i. 115
ferox, *Salisb.* ... „ 115
ferox, Planch. ... „ 115
indica, Planch. ... „ 115
Eurycoma, *Jack* ... i. 521

Eurycoma ... Vol. Page
apiculata, *A. W. Benn.* ... i. 522
longifolia, *Jack* ... „ 521
merguensis, Planch. ... „ 521
tavoyana, Wall. ... „ 521
Eurythalia carinata, D. Don iv. 113
coronata, D. Don ... „ 114
glacialis, G. Don ... „ 109
nana, G. Don ... „ 109
pedunculata, D. Don ... „ 109
vulgaris, Gueld. ... „ 305
EUSIMARUBEÆ ... i. 517
Eusynaxis barringtoniæfolia, Griff. ... i. 290
EUTHEMIDEÆ ... i. 523
Euthemis, *Jack* ... i. 526
? elegantissima, *Wall.* ... „ 526
elegantissima, ? Wall. ... „ 525
leucocarpa, *Jack* ... „ 526
minor, *Jack* ... „ 526
? *pulcherrima*, Wall. ... „ 525
Euthodon paniculata, Griff. iii. 652
EUTHYMELEÆ ... v. 192
Euthyra, Salisb. ... vi. 362
Eutrema, *Br.* ... i. 151
himalaicum, *Hk. f. & T.* ... „ 152
primulæfolium, *Hk. f. & T.* „ 152
Eutriana abyssinica, Br. ... vii. 284
enteropogon, Steud. ... „ 284
Eutropis, Falc. ... iv. 20
EUVACCINIEÆ ... iii. 442
Euxolus caudatus, Moq. ... iv. 721
lividus, Moq. ... „ 721
oleraceus, Dalz. & Gibs. ... „ 721
oleraceus, Moq. ... „ 721
polygamus, Moq. ... „ 721
viridis, Moq. ... „ 721
Evax indica, Ham. ... iii. 289
Evia amara, Comm. ... ii. 42
Evodia, *Forst.* ... i. 487
accedens, Miq. ... „ 489
fraxinifolia, *Hk. f.* ... „ 490
glabra, *Bl.* ... „ 489
glauca, Miq. ... „ 490
gracilis, Kurz ... „ 488
Lamarckiana, Benth. ... „ 488
latifolia, *DC.* ... „ 489
Marambong, Miq. ... „ 487
meliæfolia, *Benth.* ... „ 490
pedunculosa, *Hk. f.* ... „ 489
robusta, *Hk. f.* ... „ 488
Roxburghiana, *Benth.* i. 487, 674
rutæcarpa, *Hk. f. & T.* ... i. 490
triphylla, *DC.* ... „ 488
triphylla, Bedd. ... „ 487
viticina, *Wall.* ... „ 489
Evolvulus, *Linn.* ... iv. 220
alsinoides, *Linn.* ... „ 220

Evolvulus Vol. Page
alsinoides, Wall. ... ... iv. 224
angustifolius, Roxb. ... ... „ 220
emarginatus, Burm. ... ... „ 206
ferrugineus, Wall. ... ... „ 218
hederaceus, Burm. ... ... „ 219
hirsutus, Lamk. ... ... „ 220
linifolius, Linn. ... ... „ 220
nummularius, Linn. ... ... „ 734
pilosus, Roxb. ... ... „ 218
sericeus, Wall. ... ... „ 220
tridentatus, Linn. ... ... „ 205
EXACEÆ ... ... iv. 94
Exacum, *Linn.* ... ... iv. 95
alatum, Roth ... ... „ 104
atropurpureum, *Bedd.* ... „ 97
axillare, *Thw.* ... ... „ 96
Beddomei, Clarke ... ... „ 97
bellum, Hance ... ... „ 95
bicolor, *Roxb.* ... ... „ 96
carinatum, Roxb. ... ... „ 98
chironioides, Griseb. ... „ 95
? *concinnum*, Miq. ... ... „ 100
courtallense, *Arn.* ... ... „ 97
diffusum, Willd. ... ... „ 103
erectum, Roth ... ... „ 103
foliosum, Griseb. ... iv. 96, 97
grandiflorum, Wall. ... ... iv. 96
Hamiltonii, G. Don ... ... „ 95
heteroclitum, Willd. ... ... „ 104
Horsfieldianum, Miq. ... „ 95
hyssopifolium, Willd. ... „ 101
Lawii, *Clarke* ... ... „ 98
macranthum, Arn. ... ... „ 97
macrantherum, Miq. ... „ 98
Metzianum, Hohen. ... „ 96
ovale, Griseb. ... ... „ 96
pedunculare, Arn. ... ... „ 98
pedunculatum, *Linn.* ... „ 97
Perrottetii, *Griseb.* ... ... „ 95
petiolare, *Griseb.* ... ... „ 98
pteranthum, *Wall.* ... ... „ 99
pumilum, *Griseb.* ... ... „ 98
punctatum, *Linn. f.* ... „ 99
rivulare, Edgew. ... ... „ 98
sessile, *Linn.* ... ... „ 98
sessile, Clarke ... ... „ 98
stylosum, Wall. ... ... „ 95
sulcatum, Clarke ... ... „ 95
sulcatum, Roxb. ... ... „ 98
sulcatum, Wight ... ... „ 96
teres, *Wall.* ... ... „ 95
tetragonum, *Roxb.* ... ... „ 95
travancoricum, Bedd. ... „ 97
verticillatum, Willd. ... „ 101
Walkeri, *Arn.* ... ... „ 96
Wightianum, *Arn.* ... ... „ 97
zeylanicum, *Roxb.* ... iv. 97, 733

Exacum Vol. Page
zeylanicum, Wall. ... .. iv. 97
sp., Griff. ... ... „ 95
Excœcaria, *Linn.* ... ... v. 472
acerifolia, *F. Didr.* ... ... „ 473
affinis, Endl. ... ... „ 472
affinis, Griff. ... ... „ 470
Agallocha, *Linn.* ... ... „ 472
baccata, Muell. ... ... „ 470
Camettia, Willd. ... ... „ 472
Chamælea, Baill. ... ... „ 475
cochinchinensis, Muell. ... „ 473
crenulata, *Wight* ... ... „ 473
discolor, Muell. ... ... „ 469
himalayensis, Muell. ... „ 473
holophylla, *Kurz* ... ... „ 473
indica, Muell. ... ... „ 471
insignis, Bedd. ... ... „ 472
oppositifolia, *Griff.* ... .. „ 474
? *oppositifolia*, Kurz ... „ 474
oppositifolia, Muell. ... v. 473, 474
quadrangularis, *Muell.* ... v. 474
rectinervis, *Kurz* ... ... „ 473
robusta, *Hk f.* ... . „ 474
sebifera, Muell. ... v. 239, 470
virgata, Zoll. & Moritz ... v. 471
sp. ... ... „ 475
Exocarpus latifolia, Br. ... v. 232
Ewyckia capitellata, Walp. ii. 551
cyanea, Bl. ... ... „ 551
Jackiana, Walp. ... ... „ 551
latifolia, Bl. ... ... „ 551
medinilliformis, Naud. ... „ 551
paniculata, Miq. ... ... „ 551
tuberculata, Korth. ... ... „ 553

Fagara ? Budrunga, Roxb. i. 495
Lunur-ankenda, Gærtn. ... „ 487
Rhetsa, Roxb. ... ... „ 495
triphylla, Lamk. ... ... „ 488
triphylla, Roxb. ... ... „ 487
Fagonia, *Linn.* ... ... i. 425
arabica, *Linn.* ... ... „ 425
Bruguieri, *DC.* ... ... „ 425
cretica, Linn. ... ... „ 425
Echinella, Boiss. ... ... „ 425
montana, Miq. ... i. 425, iii. 620
mysorensis, Roth ... ... i. 425
Fagopyrum, *Gærtn.* ... ... v. 54
cymosum, *Meissn.* ... ... „ 55
emarginatum, Meissn. ... „ 55
esculentum, *Moench* ... „ 55
rotundatum, Bab. ... ... „ 55
tataricum, *Gærtn.* ... ... „ 55
triangulare, Meissn. ... „ 55
Fagræa, *Thunb.* ... ... iv. 82
appendiculata, Bl. ... ... „ 84
auricularia, Benth. ... ... „ 83

Fagræa Vol. Page
auriculata, *Jack* ... iv. 83
Blumei, Steud. ... „ 83
carnosa, *Jack* ... „ 82
celebica, Bl. ... „ 83
coarctata, Bl. ... „ 84
coromandeliana, Wight ... „ 83
crassifolia, Bl. ... „ 83
? *crassifolia*, Wall. ... iv. 83, 84
crassipes, Benth. ... iv. 84
crenulata, *Maingay* ... „ 83
cuspidata, Bl. ... „ 84
? *dubia*, Wall. ... i. 281
fragans, *Roxb.* ... iv. 85
Gardneri, Thw. ... „ 84
globosa, Wall. ... „ 83
imperialis, Miq. ... „ 83
khasiana, *Benth.* ... „ 84
lanceolata, Wall. ... „ 85
ligustrina, *Bl.* ... „ 85
Maingayi, *Clarke* ... „ 84
malabarica, Bl. ... „ 83
morindæfolia, *Bl.* ... „ 84
obovata, *Wall.* ... „ 83
obovato-javana, Bl. ... „ 83
peregrina, Bl. ... „ 85
racemosa, *Jack* ... „ 84
robusta, Bl. ... „ 84
Thwaitesii, F. Muell. ... „ 84
volubilis, Jack ... „ 84
Wallichiana, *Benth.* ... „ 85
zeylanica, *Thunb.* ... „ 83
Falcaria ? diversifolia, DC. . ii. 681
Falconeria, *Hk. f.* ... iv. 319
himalaica, *Hk. f.* ... „ 319
Falconeria, Royle ... v. 471
insignis, Royle ... „ 471
malabarica, Wight ... „ 472
Wallichiana, Royle ... „ 471
Farnesia odora, Gaspar. ... ii. 292
Farsetia, *Desv.* ... i. 140
ægyptiaca, *Turr.* ... „ 140
Edgeworthii, Hk. f. & T. ... „ 141
Hamiltonii, *Royle* ... „ 140
Jacquemontii, *Hk. f. & T.* „ 140
linearis, Dcne. ... „ 140
longisiliqua, Dcne. ... „ 140
ovalis, Boiss. ... „ 141
Fatioa nepaulensis, Wall. ... ii. 575
Fedia grandiflora, Wall. ... iii. 211
Fergusonia, *Hk. f.* ... iii. 48
zeylanica, *Hk. f.* ... „ 48
Feronia, *Gærtn.* ... i. 516
Elephantum, *Correa* ... „ 516
pellucida, Roth ... „ 517
Ferreola buxifolia, Roxb. ... iii. 551
Ferula, *Linn.* ... ii. 707
Asafœtida, Boiss. ... „ 708

Ferula Vol. Page
fœtidissima, Regl. & Schm. ii. 708
Jæschkeana, *Vatke* ... „ 708
Narthex, *Boiss.* ... „ 707
Thomsoni, *Clarke* ... „ 708
Festuca, *Linn.* ... vii. 348
alpestris, Wulf. ... „ 353
altaica, *Trin.* ... „ 351
Amherstiana, Royle ... „ 337
aristata, C. Koch ... „ 353
aspera, Mert. & Koch ... „ 358
asthenica, *Hk. f.* ... „ 354
barbata, Schrank ... „ 353
? *Basnia*, Ham. ... „ 298
blepharophora, R. & S. ... „ 332
calycina, Loefl. ... „ 336
ciliaris, Heyne ... „ 332
ciliata, Heyne ... „ 332
convoluta, Kunth ... „ 347
cristata, Linn. ... „ 309
cristata, Vill. ... „ 308
Cumminsii, *Stapf* ... „ 349
dactyloides, Roth ... „ 308
distans, Kunth ... „ 347
dubia, Jacquem. ... „ 348
dura, Vill. ... „ 335
duriuscula, Duthie ... „ 351
duriuscula, Hack. ... „ 348
duriuscula, *Hk. f. & T.* vii. 349, 351
Duthiei, Hack. ... vii. 352
elatior, Str. & Wint. ... „ 354
filiformis, Jacquem. ... vii. 348
filiformis, Nees ... vii. 357, 422
filiformis, Steud. ... „ 287
fusca, Linn. ... „ 329
gigantea, *Vill.* ... „ 353
gigantea, Griseb. ... „ 354
glaucescens, Roth ... „ 308
glomerata, All. ... „ 335
gracilis, Moench ... „ 363
heptantha, C. Koch ... „ 337
heterophylla, Hænke ... „ 353
heterophylla, Lamk. ... „ 351
hirsuta, Fl. Dan. ... „ 353
indica, Retz. ... „ 329
inermis, DC. ... „ 357
kashmiriana, *Stapf* ... „ 351
Kitaibeliana, Schult. ... „ 353
latifolia, Roth ... „ 332
leptopogon, *Stapf* ... „ 354
Levingei, *Stapf* ... „ 352
Leysseri, Moench ... „ 357
longifolia, Heg. & Heer ... „ 353
lucida, *Stapf* ... „ 355
maritima, Linn. ... „ 356
modesta, *Steud.* ... „ 354
mucronata, Forsk. ... „ 334
mutica, Jacq. ... „ 355

Festuca Vol. Page
mysorensis, Heyne ... vii. 284
mysurensis, Heyne ... „ 287
Myuros, *Linn.* ... „ 356
natans, Ham. ... „ 327
nigrescens, Lam. ... vii. 351, 353
nigricans, Schleich. ... vii. 351
nitidula, *Stapf* ... „ 350
? *ovina*, Griseb. ... „ 351
ovina, Host ... „ 348
ovina, Linn. ... „ 348
parviflora, Hack. ... „ 348
persica, C. Koch ... „ 337
phleoides, Vill. ... „ 309
pinnata, Moench ... „ 363
poæformis, Pers. ... „ 357
poæoides, Thuill. ... „ 357
polycolea, *Stapf* ... „ 349
polygama, C. Koch ... „ 337
Pseudomyuros, Soyer ... „ 356
pubescens, Willd. ... „ 353
pumila, Duthie... ... „ 350
pungens, Vahl ... „ 334
repens, Heg. & Heer ... „ 353
reptatrix, Linn. ... „ 329
rubra, *Linn.* ... „ 352
scaberrima, Nees ... „ 330
scaberima, Steud. ... „ 358
scabrella, Torr. ... „ 352
sibirica, *Hack.* ... „ 355
speciosa, Schreb. ... „ 357
stricta, Royle ... „ 348
sylvatica, Huds. ... „ 363
tenuiflora, *Schrad.* ... „ 356
tenuis, Ham. ... „ 298
triflora, Sm. ... „ 353
undata, *Stapf* ... „ 350
? *uniglumis*, Griseb. ... „ 356
uniglumis, Soland. ... „ 356
valesiaca, *Schleich.* ... „ 348
virgata, Heyne ... „ 332
Wightiana, Steud. ... „ 358
sp., Hk. f. & T. ... vii. 350, 355
sp., Str. & Wint. ... vii. 348
sp., Wall. ... vii. 340, 344, 363
FESTUCACEÆ ... vii. 7, 300
Fibichia umbellata, Koel. ... vii. 289
Fibraurea, *Lour.* ... i. 97
chloroleuca, Miers ... „ 98
fasciculata, Miers ... „ 98
tinctoria, *Lour.* ... „ 98
? *hæmatocarpa*, Hk. f. & T. „ 106
Ficaria glacialis, Fisch. ... i. 21
FICOIDEÆ ... ii. 658
Ficus, *Linn.* ... v. 494
abbreviata, Wall. ... „ 536
Abelii, Miq. ... „ 533
acamptophylla, *Miq.* ... „ 507

Ficus Vol. Page
acuminata, Hook. ... v. 498
acuminata, Kth. & Bouché „ 520
acuminata, Roxb. ... „ 497
acuminatissima, Miq. ... „ 496
acutiloba, Miq. ... „ 519
adhærens, Miq. ... „ 528
adnascens, Wall. ... „ 527
affinior, Griff. ... „ 513
affinis, Wall. ... „ 511
alba, *Reinw.* ... „ 530
alnifolia, Miq. ... „ 527
alternans, Wall. ... „ 536
Altimeraloo, Roxb. ... „ 497
altissima, *Bl.* ... „ 504
alutacea, *Bl.* ... „ 527
Ampelos, Kœn. ... „ 497
amplissima, Sm. ... „ 515
anastomosans, Wall. ... „ 519
ancolana, Miq. ... „ 497
angulata, Miq. ... „ 497
angulidens, Miq. ... „ 520
angustifolia (*angulifolia*) Bl. „ 520
angustifolia, Roxb. ... „ 506
annulata, *Bl.* ... „ 502
aperta, Wall. ... „ 537
apiculata, Miq.... ... „ 531
apiocarpa, *Miq.* ... „ 518
aquatica, Kœn. ... „ 518
araneosa, *King*... ... „ 529
arguta, Wall. ... „ 531
Arnottiana, *Miq.* ... „ 513
artocarpifolia, Roxb. ... „ 517
asinina, Ham. ... „ 501
asperiuscula, Kth. & Bouché „ 521
asperrima, *Roxb.* ... „ 522
assamica, Miq. ... „ 519
aurantiaca, *Griff.* ... „ 517
aurantiaca, Miq. ... „ 532
aurantiaca, Wall. ... „ 506
aurata, Miq. ... „ 531
? *barbata*, Wall. ... „ 529
Beddomei, *King* ... „ 502
bengalensis, *Linn.* ... „ 499
Benjamina, *Linn.* ... „ 508
Benjamina, Wall. ... „ 515
Benjamina, Willd. ... „ 511
bhotanica, *King* ... „ 519
biglandula, Bl. ... „ 519
biglandulosa, Miq. ... „ 519
biglandulosa, Wall. ... „ 536
binata, Wall. ... „ 534
? *bistipulata*, Griff. ... „ 506
borneensis (*vide* Pogonotrophe) ... „ 527
bracteata, *Wall.* ... „ 501
brevipes, Miq. ... „ 521
callicarpa, *Miq.* ... „ 518

Ficus Vol. Page
callosa, *Willd.* ... v. 516
caloneura, Kurz ... „ 537
Carica, Linn. ... „ 530
caricoides, Roxb. ... „ 530
caudata, Hk. f. & T. ... „ 521
caudata, Wall. ... „ 521
caudiculata, *Trim.* ... „ 510
caulocarpa, Miq. ... v. 514, 524
celebica, *Bl.* ... v. 498
cerasiformis, Desv. ... „ 498
cerifera, Bl. ... „ 535
ceriflua, Jungh. ... „ 535
ceylanica, Miq. ... „ 526
Championi, Benth. ... „ 517
chartacea, *Wall.* ... „ 533
Chincha, Roxb. ... „ 521
chittagonga, Miq. ... „ 536
chlorocarpa, Benth. ... „ 535
chlorocarpa, Miq. ... „ 531
chrysocarpa, *Reinw.* ... „ 531
chrysocoma, Bl. ... „ 501
cinerascens, Wall. ... „ 537
cinerascens, Thw. ... „ 517
citrifolia, Willd. ... „ 500
Clarkei, *King* ... , 536
clavata, *Wall.* ... „ 520
comosa, Roxb. ... „ 508
concentrica, Van Has. ... „ 498
congesta, Roxb. ... „ 537
conglobata, *King* ... „ 522
conglomerata, Roxb. ... „ 523
consociata, *Bl.* ... „ 505
copiosa, Steud. ... v. 524, 537
cordifolia, Roxb. ... v. 513
coronata, Reinw. ... „ 521
cotoniæfolia, Vahl ... „ 500
crininervia, *Miq.* ... „ 529
crustacea, Wall. ... „ 526
cuneata, Wall. ... „ 537
cuneata, Bl. ... „ 497
Cunia, *Ham.* ... „ 523
cuspidata, *Reinw.* ... „ 520
cuspidifera, Miq. ... „ 497
cyrtophylla, Wall. ... „ 521
Dæmonum, Kœn. ... „ 523
Dalhousiæ, *Miq.* ... „ 499
dasycaula (*vide* Covellia) „ 521
deltoidea, Jack ... „ 529
densa, Miq. ... „ 534
densiserra, Miq. ... „ 531
denticulata, Vahl ... „ 518
depressa, Bl. ... „ 502
dictyophylla, Wall. ... „ 508
dilatata, Miq. ... „ 511
? *dimidiata*, Wall. ... „ 517
diphylla, Wall. ... „ 525
disticha, Thw. ... „ 526

Ficus Vol. Page
diversifolia, *Bl.* ... v. 529
diversiformis, Miq. ... „ 526
dives, Miq. ... „ 529
dubia, *Wall.* ... „ 509
elastica, *Roxb.* ... „ 508
elongata, Miq. ... „ 519
Emodi, Wall. ... „ 526
erecta, *Thunb.* ... „ 532
erecta, Miq. ... „ 528
? *euphylla*, Kurz ... „ 509
? *exasperata*, Roxb. ... „ 496
excavata, *King* ... „ 526
excelsa, Vahl ... „ 497
excelsa, Wall. ... „ 497
fallax, Miq. ... „ 520
fasciculata, *King* ... „ 524
Fieldingii, Miq. ... „ 534
Finlaysoniana, Wall. ... „ 533
firma, Wall. ... „ 503
fistulosa, *Reinw.* ... „ 525
fistulosa, Kurz ... „ 524
flavescens, Bl. ... „ 502
foveolata, *Wall.* ... „ 528
fraterna, Miq. ... „ 506
fruticosa, Roxb. ... „ 526
fulva, *Reinw.* ... „ 531
gemella, Wall. ... „ 534
geminifolia, Miq. ... „ 525
geniculata, *Kurz* ... „ 516
gibbosa, *Bl.* ... v. 496, 497
glabella, *Bl.* ... v. 511
glaberrima, *Bl.* ... „ 506
glandulifera, *Wall.* ... „ 532
globosa, *Bl.* ... „ 503
glomerata, *Roxb.* ... „ 535
Gonia, Ham. ... „ 500
Goolereea, Roxb. ... „ 536
gossypina, Wall. ... „ 530
? *gracillis*, Wall. ... „ 537
grandifolia, Wall. ... „ 498
grewiæfolia (*grewiæflora*), Bl. ... „ 496
grewiæfolia, Ht. Berol ... „ 521
grisea, *Wall.* ... „ 537
grossinervis, Miq. ... „ 529
grossularioides, Burm. ... „ 519
guttata, *Kurz* ... „ 534
hæmatocarpa, Bl. ... „ 508
Hamiltoniana, Wall. ... „ 535
hapalophylla, Kurz ... „ 537
hederacea, Roxb. ... „ 526
heterophylla, *Linn.* ... „ 518
hibiscifolia, Champ. ... „ 531
hirsuta, Roxb. ... „ 532
hirta, *Vahl* ... „ 531
hispida, *Linn.* ... „ 522
hispidissima, Wight ... „ 522

Ficus Vol. Page
Hookeri, *Miq.* v. 505
humilis, Roxb. „ 519
Hunteri, Miq. „ 530
hypsophila, Miq. v. 496, 521
ichnopoda, Miq. v. 533
impressa, Benth. „ 528
incisa, Wall. „ 537
inclinata, Ham. „ 537
inclinata, Ham. „ 525
inconstans, Miq. „ 519
indica, *Linn.* „ 506
indica, Linn. v. 499, 500
infectoria, *Roxb.* v. 515
infectoria, Willd. „ 514
insignis, *Kurz* „ 515
japonica, Bl. „ 532
Junghuhniana, Miq. „ 498
Kurzii, *King* „ 509
laccifera, Roxb. „ 504
Lacor, Ham. „ 516
lævis, *Bl.* „ 526
Lambertiana, Miq. „ 516
laminosa, Hardw. „ 523
Lamponga, Miq. „ 522
lanceolata, *Ham.* „ 536
lancifolia, Miq. „ 499
lanigera, Wall. „ 529
lateritia, Wall. „ 500
lepicarpa, *Bl.* „ 525
lepidosa, *Wall.* „ 522
leptocarpa, Steud. „ 528
leucoxylon, Miq. „ 496
littoralis, Bl. „ 511
Lobbii, Miq. „ 520
longifolia, Ham. v. 506, 508
Lowii, *King* v. 504
lucescens, Bl. „ 516
ludens, Wall. „ 528
luducca, Roxb. „ 528
lutescens, Desf. v. 529, 530
Maclellandi, *King* v. 512
macrocarpa, *Wight* „ 534
macrophylla, Roxb. „ 534
macropoda, Kurz „ 537
magnoliæfolia, Bl. „ 512
Mappan, Miq. „ 530
martabanica, Wall. „ 522
microcarpa, Bl. „ 528
microcarpa, Linn. f. „ 511
microstoma, *Wall.* „ 506
microtus, Miq. „ 496
Millettii, Miq. „ 533
Miquelii, *King* „ 524
modesta, Miq. „ 512
mollis, Miq. „ 536
mollis, Vahl „ 501
mollis, Willd. „ 523

Ficus Vol. Page
? *montana*, Burm. v. 519
montana, Wall. „ 512
Mooniana, *King* „ 514
mysorensis, *Heyne* „ 500
neglecta, Bl. „ 508
nemoralis, *Wall.* „ 534
nervosa, *Roth* „ 512
nigrescens, *King* „ 520
nipponica, Fr. & Sav. „ 528
nitida, Thunb. „ 511
nivea, Bl. „ 530
nuda, Kurz „ 537
nuda, Miq. „ 508
obpyramidata, *King* „ 525
obscura, *Bl.* „ 521
obtecta, Wall. „ 529
obtusa, *Hassk.* „ 527
obtusidens, Miq. „ 520
obtusifolia, *Roxb.* „ 507
oligodon, Miq. „ 535
oligosperma, Miq. „ 528
onusta, Wall. „ 503
oppositifolia, Willd. „ 522
ovoidea, Jack v. 529, 330
oxycoccoides, Linn. v. 526
palmata, *Forsk.* „ 530
? *palmata*, Roxb. „ 530
papyrifera, Griff. „ 508
paradoxa, Bl. „ 497
parasitica, Kœn. „ 497
parietalis, *Bl.* „ 498
parvifolia, Miq. „ 511
? *pedicellata*, Wall. „ 526
pellucido-punctata, Griff. „ 506
pendula, Link „ 508
pervia, Miq. „ 497
phlebophylla, Miq. „ 498
pilosa, *Reinw.* „ 500
piperifolia, Miq. „ 527
pisifera, *Wall.* „ 496
pisocarpa, *Bl.* „ 510
platycaula, Miq. „ 527
politoria, Moon „ 522
polycarpa, Roxb. „ 524
pomifera, *Wall.* „ 535
pomifera, Kurz „ 518
populifolia, Wall. „ 513
procera, Bl. „ 505
prominens, Wall. „ 523
prostrata, *Wall.* „ 523
prostrata, Wall. „ 524
pruniformis, *Bl.* „ 502
Pseudo-sycamorus, Dcne. „ 530
pubescens, Roth „ 500
pubigera, Kurz „ 537
pubigera, Wall. „ 528
? *pulchra*, Wall. „ 537

Ficus Vol. Page
pumila, Thunb. ... ... v. 532
punctata, *Thunb.* ... ... „ 517
punctata, Heyne ... ... „ 516
? *pyrifolia*, Burm. ... ... „ 532
pyriformis, *Hk. & Arn.* ... „ 533
pyrrhocarpa, Kurz ... ... „ 523
quercifolia, *Roxb.* ... ... „ 519
quercifolia, Bl. ... ... „ 520
racemifera, Roxb. ... ... „ 535
racemosa, Wall. ... ... „ 536
radicans, Roxb. ... ... „ 520
ramea, Wall. ... ... „ 537
ramentacea, *Roxb.* ... ... „ 528
raridens, Miq. ... ... „ 520
recurva, *Bl.* ... ... „ 527
Reemblas, Miq. ... ... „ 521
regia, Miq. ... ... v. 534, 535
Reinwardtii, Link & Otto v. 531
religiosa, *Linn.* ... ... „ 513
repens, Ham. ... ... „ 518
repens, Willd. ... ... „ 518
reticulosa, Miq. ... ... „ 497
retusa, *Linn.* ... ... „ 511
rhododendrifolia, *Miq.* ... „ 510
Ribes, *Reinw.* ... ... „ 524
ribesioides, Wall. ... ... „ 527
rigescens, Miq. ... ... „ 528
rigida, *Miq.* ... ... „ 505
rigida, Bl. ... ... „ 497
rigida, Ham. ... ... „ 516
rostrata, *Lamk.* ... ... „ 520
rotundifolia, Roxb. ... ... „ 537
Roxburghii, *Wall.* ... ... „ 534
Roxburghii, Miq. ... ... „ 532
rubescens, Bl. ... ... „ 506
rubifolia, Griff. ... ... „ 519
rubra, Roth ... ... „ 511
rufescens, Ham. ... ... „ 518
rufescens, Vahl ... ... „ 518
rufipila, Miq. ... ... „ 498
Rumphii, *Bl.* ... ... „ 512
rupestris, Ham. ... ... „ 500
sæmocarpa, *Miq.* ... ... „ 523
salicifolia, Miq. ... ... „ 521
saxatilis, Bl. ... ... „ 520
saxatilis, Miq. ... ... „ 496
scabra, Jacq. ... ... „ 523
scabrella, Roxb. ... ... „ 518
scandens, *Roxb.* ... ... „ 526
sclerophylla, Roxb. ... ... „ 497
scleroptera, Griff. ... ... „ 534
scleroptera, Miq. ... ... „ 516
setifera, Steud. ... ... „ 531
setosa, Bl. ... ... „ 531
sideroxifolia, Griff. ... ... „ 529
Sieboldi, Miq. ... ... „ 532
sikkimensis, *Miq.* ... ... „ 521

Ficus Vol. Page
silhetensis, *Miq.* ... ... v. 533
sinuosa, Miq. ... ... „ 519
Spanogheana, Miq. ... ... „ 527
spathulata, Miq. ... ... „ 529
squamosa, Roxb. ... ... „ 523
stipulata, Moon ... ... „ 526
stipulata, Wall. ... ... „ 518
? *striata*, Roth ... ... „ 508
strigosa, Bl. ... ... „ 527
subdenticulata, Miq. ... „ 521
subobliqua, Miq. ... ... „ 497
subopaca, Miq. ... ... „ 535
suborbicularis, Miq. ... ... „ 531
subpanduræformis, Miq. ... „ 519
subpedunculata, Miq. ... „ 511
subpyriformis, Miq. ... ... „ 533
subracemosa, Bl. ... ... „ 535
subrepanda, Wall. ... v. 500, 537
? *subrigida*, Miq. ... ... v. 528
subulata, *Bl.* ... ... „ 497
sundaica, Bl. ... ... „ 506
sycomoroides, Miq. ... ... „ 535
Tabing, Miq. ... ... „ 498
Tadjam, Miq. ... ... „ 496
Talboti, *King* ... ... „ 512
tengerensis, Miq. ... ... „ 525
tenuiramis, Kth. & Bouché „ 520
terminalioides, Griff. ... „ 516
tetangis (*tetrargys*), Miq... „ 518
Teysmanniana, Miq. ... „ 527
Thomsoni, Miq. ... ... „ 506
Thunbergii, Maxim. ... ... „ 528
Thwaitesii, *Miq.* ... ... „ 525
Tjakela, *Burm.* ... ... „ 514
Tjela, Wall. ... ... „ 515
Tjiela, Roxb. ... ... „ 500
tomentosa, *Roxb.* ... ... „ 501
tomentosa, Herb. Madr. ... „ 500
Tondana, Miq. ... ... „ 496
torulosa, Wall. ... ... „ 533
trachycarpa, Miq. ... ... „ 521
trachycoma, Miq. ... ... „ 517
travancorica, *King* ... ... „ 503
Tremblas, Miq. ... ... „ 496
trilepis, Miq. ... ... „ 534
triloba, Ham. ... ... „ 532
Trimeni, *King* ... ... „ 509
triplinervis, Wall. ... ... „ 526
truncata, *King* ... ... „ 507
truncata, Ham. ... ... „ 518
truncata, Vahl ... ... „ 518
Tsiela, *Roxb.* ... ... „ 515
tuberculata, Roxb. ... ... „ 497
tuberculata, Wall. ... ... „ 523
umbonata, Wall. ... ... „ 533
uniglandulosa, Wall. ... „ 520
urnigera, Miq. ... ... „ 527

Ficus Vol. Page
urophylla, *Wall.* v. 498
urticifolia, Roxb. „ 537
vagans, Roxb. „ 526
vagans, Wall. „ 528
valida, Bl. „ 502
variegata, *Bl.* „ 535
variolosa, *Lindl.* „ 532
vasculosa, *Wall.* „ 517
venosa, Ait. „ 514
venosa, Wall. „ 515
vestita, Wall. „ 537
villipes, Miq. „ 527
villosa, *Bl.* „ 529
virgata, Reinw. „ 497
virgata, Roxb. „ 530
volkhameriæfolia, Wall. „ 525
Wightiana, Benth. „ 511
Wightiana, Wall. „ 516
Wrightii, Benth. „ 528
xylophylla, *Wall.* „ 503
Zollingeriana, Miq. (*vide* Covellia) „ 521
sp., Griff. v. 513, 528
Fieldia gigantea, Rchb. f. vi. 27
Filago, *Linn.* iii. 277
arvensis, *Linn.* „ 277
germanica, *Linn.* „ 277
prostrata, DC. „ 289
prostrata, Parl. „ 277
spathulata, Presl „ 277
Filicium, *Thw.* i. 539
decipiens, *Thw.* „ 539
Fimbristylis, *Vahl* vi. 630
abbreviata, Boeck. „ 648
abjiciens, Steud. „ 631
acicularis, Br. „ 631
actinoschœnus, *Clarke* „ 650
acuminata, *Vahl* „ 631
æstivalis, *Vahl* „ 637
albicans, *Nees* „ 641
albo-viridis, *Clarke* „ 638
amblyphylla, Steud. „ 645
andamanica, Kurz „ 639
angularis, Steud. „ 644
annua, R. & S. vi. 636, 637
aphylla, Steud. vi. 644
argentea, *Vahl* vi. 596, 640
Arnottiana, *Boeck.* vi. 643
Arnottii, Thw. „ 631
arvensis, Vahl „ 639
asperrima, *Boeck.* „ 643
autumnalis, R. & S. „ 646
barbata, Benth. „ 652
benghalensis, R. & S. „ 644
biflora, Boeck. „ 650
bispicata, Boeck. „ 634
bispicata, Nees „ 634

Fimbristylis Vol. Page
biumbellulata, Boeck. vi. 640
Boeckeleri, Steud. vi. 644, 646
brachyphylla, Schult. vi. 636
brevifolia, Steud. „ 632
Buergueri, Miq. „ 639
capillacea, Steud. „ 652
capillaris, Benth. „ 652
capitata, Zoll. „ 640
chætorrhiza, Kunth „ 647
chætorrhiza, Thw. vi. 643, 648
ciliolata, Steud. vi. 640
cincta, Nees „ 636
cinnamometorum, Hance „ 649
cinnamometorum, Kunth „ 650
comata, Nees „ 635
communis, Kunth vi. 636, 638
complanata, *Link* vi. 646
complanata, Benth. „ 646
compressa, *Boeck.* „ 639
confinis, Steud. „ 639
connectens, Thw. „ 646
curvifolia, Steud. „ 636
cylindrocarpa, Kunth „ 631
cyperoides, *Br.* „ 650
cyrtophylla, Miq. „ 639
dasyphylla, Miq. „ 641
decora, Nees & Mey. „ 641
depauperata, Br. vi. 636, 637
dichotoma, *Vahl* vi. 635
dichotoma, Boeck. „ 637
digitata, *Boeck.* „ 648
diphylla, *Vahl* „ 636
diphylla, Vahl vi. 638, 646
dipsacea, *Benth.* vi. 635
disticha, *Boeck.* „ 651
efoliata, Steud. „ 645
falcata, Boeck. „ 648
falcata, Kunth „ 647
ferruginea, *Vahl* „ 638
ferruginea, Miq. „ 639
filifolia, *Boeck.* „ 643
filiformis, Kunth „ 633
flaccida, Steud. „ 644
flaccidula, Zoll. „ 644
foliosa, Link „ 636
fulvescens, *Thw.* „ 650
fusca, *Benth.* „ 649
fuscinux, *Clarke* „ 638
Gambleana, Boeck. „ 651
glabra, Steud. vi. 642, 650
glauca, Vahl vi. 636
globulosa, *Kunth* „ 644
glomerata, Nees „ 640
gracilis, Arn. „ 639
Griffithiana, Steud. „ 637
Griffithii, Boeck. „ 637
Hænkei, Dietr. vi. 647, 648

Fimbristylis Vol. Page
Halophila, Kurz ... ... vi. 632
Hanceana, Boeck. ... ... „ 640
Heynei, Boeck. ... ... „ 636
Hookeriana, *Boeck.* ... ... „ 641
inconstans, Steud. ... ... „ 634
insignis, *Thw.* ... ... „ 645
japonica, Sieb. & Zucc. ... „ 634
juncea, Boeck. ... ... „ 632
juncea, R. & S. ... ... „ 633
junciformis, *Kunth* ... ... „ 647
junciformis, Munro ... ... „ 640
Kamphœveneri, Boeck. ... „ 649
Kingii, *Clarke* ... ... „ 633
Kraussiana, Hochst. ... „ 646
lævissima, Steud. ... ... „ 640
latifolia, Kunth ... ... „ 648
laxa, Vahl ... ... „ 636
leptoclada, *Benth.* ... ... „ 647
littoralis, Gaud. ... . „ 644
longispica, *Steud.* ... ... „ 639
malaccana, Boeck. ... ... „ 633
marginata, Labill. ... ... „ 639
merguensis, *Clarke* ... ... „ 642
Metzii, Steud. ... ... „ 636
microcarpa, F. Muell. ... „ 646
miliacea, *Vahl* ... ... „ 644
? *mollis*, Kunth ... ... „ 672
monandra, F. Muell. ... „ 633
monandra, R. & S. ... ... „ 652
monostachya, *Hassk.* ... „ 649
monticola, *Steud.* ... ... „ 642
muriculata, Benth. ... ... „ 642
nigrobrunnea, *Thw.* ... „ 648
nutans, *Vahl* ... ... „ 632
ochreata, Boeck. ... ... „ 639
ovalis, Nees ... ... „ 636
oxylepis, Steud. ... ... „ 642
pallescens, Nees ... ... „ 636
pauciflora, *Br.* ... ... „ 633
paupercula, *Boeck.* ... ... „ 647
pentaptera, *Kunth* ... ... „ 645
pentastachya, Boeck. ... „ 636
Pierotii, *Miq.* ... ... „ 642
podocarpa, *Nees* ... ... „ 638
podocarpa, Munro ... ... „ 638
podocarpa, Nees ... ... „ 636
polymorpha, Boeck. ... vi. 636, 638
polytrichoides, *Vahl* ... vi. 632
pumila, Benth. ... ... „ 633
pycnostachya, Hance ... „ 648
quinquangularis, *Kunth*... „ 644
retusa, Thw. ... ... „ 647
rigida, Kunth ... ... „ 640
rigidula, *Nees* ... ... „ 640
rigidula, Herb. Berol ... „ 640
rigidula, Thw. ... ... „ 636
Roxburghii, Dietr. ... ... „ 639

Fimbristylis Vol. Page
Royeniana, Nees ... ... vi. 636
Salbundia, *Kunth* ... ... „ 646
Salbundia, Boeck. ... ... „ 644
Salbundia, Thw. ... ... „ 645
scaberrima, *Nees* ... ... „ 637
scabra, Kunth ... ... „ 646
schœnoides, *Vahl* ... ... „ 634
sericea, *Br.* ... ... „ 641
setacea, *Benth.* ... ... „ 632
similis, Steud. ... ... „ 636
spadicea, Boeck. ... ... „ 636
spathacea, *Roth* ... ... „ 640
spirostachys, F. Muell. ... „ 637
squarrosa, *Vahl* ... ... „ 635
stolonifera, *Clarke* ... ... „ 637
subspicata, *Nees & Meyen* „ 634
sub-bulbosa, Boeck. ... vi. 632, 633
subtetrastachya, Boeck. ... vi. 648
subtrabeculata, *Clarke* ... „ 633
tenera, *R. & S.* ... ... „ 642
tenera, Boeck. ... vi. 644, 646, 651
tenuicula, *Boeck.* ... ... vi. 632
tenuifolia, Nees ... ... „ 639
tenuifolia, Thw. ... ... „ 642
tetragona, *Br.* ... ... vi. 366, 631
Thomsonii, *Boeck.* ... ... vi. 646
Thwaitesii, Boeck. ... ... „ 645
tomentosa, Vahl ... ... „ 636
Torresiana, Gaud. ... ... „ 645
torta, Kunth ... ... „ 648
tricholepis, Miq. ... ... „ 637
trispicata, Steud. ... ... „ 639
tristachya, *Thw.* ... ... „ 649
uliginosa, *Steud.* ... ... „ 648
umbellaris, Vahl ... ... „ 645
velutina, Franch. ... ... „ 641
Wightiana, Nees ... ... „ 640
sp., Wall. vi. 604, 612, 635, 636, 637, 638, 639, 640, 642, 643, 644, 645, 646, 647, 648, 649, 659.
Fingerhuthia, *Lehm.* ... ... vii. 306
affghanica, *Boiss.* ... ... „ 306
africana, Aitch. ... ... „ 306
Finlaysonia, *Wall.* ... ... iv. 7
obovata, *Wall.* ... ... „ 7
Firmiana, Marsil. ... ... i. 359
colorata, Br. ... ... „ 360
Fisquetia macrocarpa, Gaud. vi. 484
militaris, Gaud. ... ... „ 486
ornata, Gaud. ... ... „ 486
ovata, Gaud. ... ... „ 487
Fissistigma scandens, Griff.... i. 80
Flacourtia, *Comm.* ... ... i. 191
Cataphracta, *Roxb.* ... ... „ 193
Cataphracta, Bl. ... ... „ 192
Cataphracta, Wall. ... ... „ 194
cordifolia, Roxb. ... ... „ 194

Flacourtia ... Vol. Page
  crenata, Wall. ... i. 191
  ferox, Wall. ... ,, 194
  inermis, *Roxb.* ... ,, 192
  inermis, Miq. ... ,, 192
  inermis, Wall. ... ,, 190
  Jangomas, Miq. ... ,, 193
  mollis, *Hk. f. & T.* ... ,, 192
  montana, *Grah.* ... ,, 192
  montana, Zipp. ... ,, 192
  nivea, Moon ... ,, 194
  obcordata, Roxb. ... ,, 194
  ? *Perrottetiana*, Clos ... ,, 193
  ? *quintuplinervis*, Turcz. ... ,, 192
  Ramontchi, *L'Her.* ... ,, 193
  Ramontchi, Wall. ... ,, 193
  rotundifolia, Roxb. ... ,, 194
  Rukam, *Zoll. & Mor.* ... ,, 192
  sapida, Roxb. ... ,, 193
  sapida, Wall. ... ,, 191
  sepiaria, *Roxb.* ... ,, 194
  stigmarota, Wall. ... ,, 190
  sumatrana, *Planch.* ... ,, 192
  Wightiana, Wall. ... ,, 194
Flacourtiacea, Wall. ... i. 419
FLACOURTIEÆ ... i. 189
Flagellaria, *Linn.* ... vi. 390
  angustifolia, Wall. ... ,, 391
  indica, *Linn.* ... ,, 391
  minor, Bl. ... ,, 391
FLAGELLARIEÆ ... vi. 390
Flemingia, *Roxb. ex Ait.* ... ii. 226
  abrupta, Wall. ... ,, 227
  angustifolia, Roxb. ... ,, 229
  bracteata, Wight ... ,, 227
  capitata, Ham. ... ,, 229
  capitata, Zolling. ... ,, 229
  Chappar, *Ham.* ... ,, 227
  chlorostachys, Wall. ... ,, 227
  congesta, *Roxb.* ... ,, 228
  ferruginea, Wall. ... ,, 229
  fruticulosa, Wall. ... ,, 227
  Grahamiana, *W. & A.* ... ,, 228
  involucrata, *Benth.* ... ,, 229
  latifolia, Benth. ... ,, 229
  lineata, *Roxb.* ... ,, 228
  nana, Roxb. ... ,, 229
  nana, Wall. ... ,, 229
  paniculata, *Wall.* ... ,, 227
  Phursia, Ham. ... ,, 227
  procumbens, Roxb. ... ,, 229
  procumbens, Wight ... ,, 230
  prostrata, Roxb. ... ,, 229
  pycnantha, Benth. ... ,, 228
  Rothiana, DC. ... ,, 220
  semialata, Roxb. ... ,, 229
  sericans, Kurz ... ,, 229
  stricta, *Roxb.* ... ,, 228

Flemingia ... Vol. Page
  stricta, Wall. ... ii. 229
  strobilifera, *R. Br.* ... ,, 227
  tuberosa, *Dalz.* ... ,, 230
  vestita, *Benth.* ... ,, 230
  Wallichii, *W. & A.* ... ,, 229
  Wightiana, Grah. ... ,, 229
Flemingia, Roxb. ex Rottl.
  grandiflora, Rottl. & Willd. iv. 392
Fleurya, *Gaud.* ... v. 548
  glomerata, Gaud. ... ,, 549
  interrupta, *Gaud.* ... ,, 548
  spicata, Gaud. ... ,, 549
Floscopa, *Lour.* ... vi. 390
  Hamiltonii, Hassk. ... ,, 390
  Meyeniana, Hassk. ... ,, 390
  paniculata, Hassk. ... vi. 382, 390
  petiolata, Hassk. ... vi. 390
  scandens, *Lour.* ... ,, 390
  undulata, Hassk. ... ,, 390
Flourensia cæspitosa, Camb. i. 243
Flueggea, *vel* Fluggea, *Willd.* v. 328
  angulata, Baill. ... ,, 328
  elliptica, Ham. ... ,, 328
  leucophylla, Wall. ... ,, 328
  leucopyrus, *Willd.* ... ,, 328
  leucopyrus, Dalz. & Gibs. ... ,, 328
  leucopyrus, Wight ... i. 194
  major, Baill. ... v. 305
  melanthesoides, F. Muell. ... ,, 328
  microcarpa, *Bl.* ... ,, 328
  obovata, Ham. ... ,, 328
  phyllanthoides, *Baill.* ... ,, 329
  virosa, Baill. ... ,, 328
  virosa, Dalz. & Gibs. ... ,, 329
  Wallichiana, Baill. ... ,, 329
  xerocarpa, A. Juss. ... ,, 329
Fluggea, Rich. ... vi.
  dracænoides, Baker ... ,, 268
  Griffithii, Baker ... ,, 270
  intermedia, Kunth ... ,, 269
  Jacquemontiana, Kunth ... ,, 269
  japonica, Rich. ... ,, 267
  ? *prolifera*, Baker ... ,, 270
  Wallichiana, Kunth ... ,, 268
Fluvialis indica, Pers. ... vi. 569
Fœniculum, *Adans.* ... ii. 695
  dulce, C. Bauh. ... ,, 695
  officinale, Allion. ... ,, 695
  Panmorium, DC. ... ,, 695
  piperitum, DC. ... ,, 695
  vulgare, *Gærtn.* ... ,, 695
Fornicaria ... vi. 33
Forrestia, *A. Rich.* ... vi. 383
  glabrata, *Hassk.* ... ,, 384
  Griffithii, *Clarke* ... ,, 383
  hispida, A. Rich. ... ,, 383
  hispida, Bot. Mag. ... ,, 383

Forrestia Vol. Page
Hookeri, *Hassk.* ... ... vi. 384
marginata, *Hassk.* ... ... „ 383
mollis, *Hassk.* ... ... „ 383
rostrata, Hassk. ... ... „ 384
Forskahlea, *Linn.* ... ... v. 593
latifolia, Retz. ... ... „ 593
tenacissima, *Linn.* ... ... „ 593
urticoides, Wight ... ... „ 593
Fothergilla involucrata, Falc. ii. 426
Fragaria, *Linn.* ... ... ii. 343
arguta, Lindl. ... ... „ 343
collina, Ehrh. ... ... „ 344
Daltoniana, *J. Gay* ... ... „ 345
elatior, W. & A. ... ... „ 344
indica, *Andr.* ... ... „ 343
indica, Wall. ... ... „ 346
malayana, Roxb. ... ... „ 343
nilgerica, Zenker ... ... „ 343
nilgerrensis, *Schldl.* ... „ 344
nubicola, Lindl. ... ... „ 344
Roxburghii, W. & A. ... „ 343
sikkimensis, Kurz ... ... „ 345
vesca, *Linn.* ... ... „ 344
Francœuria crispa, Cass. ... iii. 299
Frankenia, *Linn.* ... ... i. 212
pulverulenta, *Linn.* ... „ 212
FRANKENIACEÆ ... ... i. 211
Franquevillea major, Zoll. ... vi. 279
FRAXINEÆ ... ... iii. 590
Fraxinus, *Linn.* ... ... iii. 605
dimorpha, Coss. & Dur. ... „ 606
excelsior, *Linn.* ... ... „ 606
floribunda, *Wall.* ... ... „ 605
Griffithii, *Clarke* ... ... „ 605
heterophylla, Vahl ... ... „ 606
Moorcroftiana, Brand ... „ 606
Moorcroftiana, Wall. ... „ 606
retusa, Champ. ... ... „ 605
urophylla, Wall. ... ... „ 605
xanthoxyloides, *Wall.* ... „ 606
Frerea, *Dalz.* ... ... iv. 76
indica, *Dalz.* ... ... „ 76
Freycinetia, *Gaud.* ... ... vi. 487
angustifolia, *Bl.* ... ... „ 487
angustifolia, Kurz ... ... „ 487
Brunoniana, Wall. ... ... „ 487
Debregeasiana, Gaud. ... „ 487
Gaudichaudii, *Bennet* ... „ 488
insignis, *Bl.* ... ... „ 488
pycnophylla, *Solms.* ... „ 487
Walkeri, *Solms.* ... ... „ 487
Freziera ? attenuata, Wall.... i. 290
Fritillaria, *Linn.* ... ... vi. 352
cirrhosa, *D. Don* ... ... „ 353
Corona-imperialis, Gærtn. „ 354
Gardneriana, *Wall.* ... ... „ 353
Gulielmi-Waldemarii, Klotz. „ 353

Fritillaria Vol. Page
Hookeri, Baker ... ... vi. 352
imperialis, *Linn.* ... ... „ 353
? macrophylla, D. Don ... „ 352
oxypetala, *Royle* ... ... „ 352
oxypetala, Hook. ... ... „ 353
Roylei, *Hook.* ... ... „ 353
Stracheyi, *Hk. f.* ... ... „ 353
Thomsoniana, D. Don ... „ 352
? triceps (*vide* Lilium) ... „ 353
verticillata, Wall. ... ... „ 353
Fuirena, *Rottb.* ... ... vi. 665
canescens, Vahl... ... ... „ 666
ciliaris, Nees ... ... „ 666
ciliaris, Roxb. ... ... „ 666
cuspidata, Kunth ... ... „ 665
glomerata, *Lam.* ... ... „ 666
paniculata, Lam. ... ... „ 667
pentagona, Nees ... ... „ 667
pubescens, *Kunth* ... ... „ 665
pubescens, Boeck. ... ... „ 665
quinquangularis, Hassk.... „ 667
Rottboellii, Nees ... ... „ 666
Trilobites, *Clarke* ... ... „ 666
umbellata, *Rottb.* ... ... „ 666
uncinata, *Kunth* ... ... „ 666
uncinata, Thw. ... ... „ 667
Wallichiana, *Kunth* ... „ 665
sp., Wall. ... ... vi. 665, 666, 667
Fullartonia kumaonensis, DC. ... ... iii. 332, 671
Fumaria, *Linn.* ... ... i. 127
parviflora, *Lamk.* ... ... „ 128
Vaillantii, Loisel ... ... „ 128
FUMARIACEÆ ... ... i. 120
Fussia caryophylla, Schur ... vii. 272

Gabertia scripta, Gaud. ... vi. 18
Gaertnera, *Lamk.* ... ... iv. 91
acuminata, Benth. ... ... „ 91
divaricata, Thw. ... ... „ 91
Gardneri, Thw. ... ... „ 92
grisea, *Hk. f.* ... ... „ 92
Junghuhnii, Miq. ... ... „ 91
Koenigii, *Wight* ... ... „ 91
laurifolia, Hb. Madr. ... i. 419
longifolia, Bojer ... ... iv. 93
obesa, *Hk. f.* ... ... „ 92
obtusifolia, DC.... ... ... i. 418
Pongati, Retz ... ... iii. 438
racemosa, Roxb. ... ... i. 418
rosea, *Benth.* ... ... iv. 92
ternifolia, *Thw.* ... ... „ 92
thyrsiflora, Bl. ... ... „ 91
viminea, *Hk. f.*... ... ... „ 91
Walkeri, *Wight* ... ... „ 92
GAERTNERIÆ... ... ... iv. 79
Gagea, *Salisb.* ... ... vi. 355

Gagea Vol. Page
amblyopetala, Boiss. & Heldr. vi. 356
commutata, C. Koch „ 356
elegans, Wall. „ 355
lutea, *Schult. f.* „ 355
Moorcroftiana, Wall. „ 355
pedunculata, Wall. „ 356
persica, *Boiss.* „ 355
? *pulchella*, Wall. „ 354
reticulata, *Schult. f.* „ 356
sarmentosa, C. Koch „ 356
stipitata, Merkl. „ 356
taurica, Stev. „ 356
triphylla, C. Koch „ 356
Gahnia, *Forst.* vi. 676
javanica, *Moritz* „ 676
Gaillonia, *A. Rich.* iii. 201
calycoptera, *J. & S.* „ 201
hymenostephana, *J. & S.* „ 202
Gaja pippali (nippeli), Jones v. 158
Galactia, *P. Br.* ii. 192
graminea, Heyne „ 192
? oxyphylla, *Benth.* „ 192
simplicifolia, Dalz. „ 191
tenuiflora, *W. & A.* „ 192
tenuiflora, Wall. „ 192
villosa, W. & A. „ 192
Galanga, Salisb. vi. 253
Galatella asperrima, Nees iii. 252
juncea, Lindl. „ 251
Galearia, *Zoll. & Moritz.* v. 377
affinis, *Br.* „ 379
angustifolia, Miq. „ 380
elliptica, Miq. „ 380
fulva, *Muell.* „ 378
Helferi, *Hk. f.* „ 378
Jackiana, *Hk. f.* „ 378
Lindleyana, *Muell.* „ 379
Maingayi, *Hk. f.* „ 377
pedicellata, *Hk. f.* „ 378
phlebocarpa, *Br.* „ 380
splendens, Miq. „ 380
subulata, *Muell.* „ 379
sumatrana, Miq. „ 380
Wallichii, *Br.* „ 379
Wallichii, Kurz. „ 378
GALEARIEÆ v. 242
Galedupa arborea, Roxb. ii. 240
elliptica, Roxb. „ 243
indica, Lam. „ 240
marginata, Roxb. „ 243
Piscidia, Roxb. „ 107
uliginosa, Roxb. „ 241
Galega arborescens, Hb. Madr. ii. 111
argentea, Lamk. „ 113
Barba-jovis, Burm. „ 113
Colonila, Ham. „ 112
Colutea, Burm. „ 95
Galega Vol. Page
Colutea, Willd. ii. 114
diffusa, Roxb. „ 113
Heyneana, Roxb. „ 111
hirta, Ham. „ 113
incana, Roxb. „ 114
lanceæfolia, Roxb. „ 112
maxima, Linn. „ 113
pentaphylla, Roxb. „ 112
procumbens, Ham. „ 113
purpurea, Linn. „ 112
senticosa, Linn. „ 112
sericea, Ham. „ 112
spinosa, Linn. „ 112
tinctoria, Lamk. „ 112
villosa, Linn. „ 113
GALEGEÆ ii. 57
Galeola, *Lour.* vi. 88
altissima, *Rchb. f.* „ 89
altissima ? Rchb. f. „ 89
Cathcartii, *Hk. f.* „ 89
Falconeri, *Hk. f.* „ 88
Hydra, *Rchb. f.* „ 89
javanica, *Benth.* vi. 88, 197
Lindleyana, *Rchb. f.* vi. 88
? pusilla, *Hk. f.* „ 89
Galeopsis, *Linn.* iv. 677
Tetrahit, *Linn.* „ 667
Galera nutans, Bl. vi. 124
rosea, Bl. „ 124
GALIEÆ iii. 22, 202
Galinsoga, *R. & P.* iii. 311
parviflora, *Cav.* „ 311
Galium, *Linn.* iii. 204
acutum, *Edgew.* „ 208
Aparine, *Linn.* „ 205
Aparine, Wall. iii. 206, 207
asperifolium, Wall. iii. 207
asperuloides, Edgew. „ 205
boreale, *Linn.* „ 205
capillare, Cav. „ 208
ceratophylloides, *Hk. f.* „ 209
ciliatum, D. Don „ 206
confertum, *Royle* „ 206
divaricatum, Lam. „ 208
elegans, Wall. „ 204
exile, *Hk. f.* „ 207
floribundum, Jacq. „ 208
gratum, Wall. „ 205
Hamiltoni, Spreng. „ 204
himalayense, Klotz. „ 208
hirtiflorum, *Req.* „ 206
javanicum, Bl. „ 205
latifolium, Ham. „ 204
lividum, Jacq. „ 207
Mollugo, *Linn.* „ 207
paradoxum, *Maxim.* „ 206
parviflorum, D. Don „ 207

Galium Vol. Page
pauciflorum, *Bunge* ... .. iii. 205
punduanum, Wall. ... ... „ 204
Requienanum, W. & A. ... „ 205
rotundifolium, *Linn.* ... „ 204
serpylloides, *Royle* ... ... „ 207
setaceum, *Lamk.* ... ... „ 208
spurium, *Linn.* ... ... „ 208
stellariæfolium, Fr. & Sav. „ 206
tenuissimum, *Bieb.* ... ... „ 208
tricorne, *With.* ... .. „ 207
triflorum, *Michx.* ... ... „ 205
vernum, *Scop.* ... ... „ 209
verum, *Linn.* ... ... „ 208
vestitum, *D. Don* ... ... „ 206
Gallesioa graveolens, Rœm. i. 505
pentaphylla, Rœm. ... ... „ 504
Galumpita cuspidata, Bl. ... v. 486
Gamblea, *Clarke* ... ... ii. 739
ciliata, *Clarke* ... ... „ 740
Gamochilus, Lestib. ... ... vi. 231
Gamoplexis, Falc. ... ... vi. 122
orobanchoides, Falc. ... ... „ 122
Ganitrus sphærica, Gærtn. i. 400
Ganosma inodora, Lour. ... iv. 33
Garciana cochinchinensis, Lour. ... ... vi. 363
Garcinia, *Linn.* ... ... i. 259
acuminata, Pl. & Tr. ... „ 264
affinis, Wall. ... ... i. 260, 266
affinis, W. & A. ... ... i. 262
Andersoni, *Hk.f.* ... ... „ 270
anomala, *Pl. & Tr.* ... „ 266
atro-viridis, *Griff.* ... ... „ 266
bancana, *Miq.* ... ... „ 263
Bhumicowa, Roxb. ... ... „ 266
Cambogia, *Desr.* ... ... „ 261
cambogioides, Royle ... ... „ 265
celebica, Desr. ... ... „ 261
celebica, Linn. .. „ 260
Choisyana, *Wall.* ... ... „ 265
conicarpa, Wight ... ... „ 262
cornea, *Linn.* ... ... „ 260
Cowa, *Roxb.* ... ... „ 262
echinocarpa, *Thw.* ... ... „ 264
elliptica, Wall. ... ... i. 262, 264
eugeniæfolia, *Wall.* ... ... i. 268
Gaudichaudi, Pl. & Tr. ... „ 265
Griffithii, *Anders.* ... ... „ 266
Gutta, Wight ... ... „ 264
heterandra, *Wall.* ... ... „ 265
indica, *Chois.* ... ... i. 261, 262
Kydia, Roxb. ... ... i. 262
Kydiana, Laness. ... ... „ 262
lanceæfolia, *Roxb.* ... i. 261, 263
lateriflora, Bl. ... ... i. 265
lobulosa, Wall. ... ... i. 262, 264
loniceroides, *Anders.* ... i. 264

Garcinia Vol. Page
macrophylla, Anders. ... i. 270
Maingayi, *Hk. f.* ... ... „ 267
malabarica, Desr. ... ... iii. 556
malaccensis, *Hk. f.* ... ... i. 261
Mangostana, *Linn.* ... ... „ 260
merguensis, *Wight* ... ... „ 267
Morella, *Desr.* ... ... i. 261, 264
nervosa, *Miq.* ... ... i. 715
nigro-lineata, *Planch.* ... „ 263
ovalifolia, *Hk. f.* ... ... „ 269
oxyphylla, Pl. & Tr. ... ... „ 263
paniculata, *Roxb.* ... ... „ 266
Papilla, Wight ... ... „ 262
pedunculata, *Roxb.* ... ... „ 264
pictoria, Roxb. ... ... „ 264
purpurea, Roxb. ... ... „ 261
purpurea, Wall. ... ... „ 263
Roxburghii, Wight ... ... „ 262
speciosa, *Wall.* ... i. 260, 267
spectabilis, Hk. f. ... ... i. 261
stipulata, *Anders.* ... ... „ 267
succifolia, *Kurz* ... ... „ 270
terpnophylla, *Thw.* ... ... „ 268
travancorica, *Bedd.* ... ... „ 268
umbellifera, Roxb. ... ... „ 262
umbellifera, Wall. ... ... „ 263
venulosa, Chois. ... ... „ 260
Wallichii, Chois. ... i. 262, 263
Wightii, *T. Anders.* ... ... i. 265
Xanthochymus, *Hk. f.* ... „ 269
zeylanica, Roxb. ... ... „ 262
sp., Bedd. ... ... „ 268
GARCINIEÆ ... ... i. 259
Gardenia, *Linn.* ... ... iii. 115
? *anisophylla*, Wall. ... „ 114
arborea, Roxb. ... ... „ 116
? *Blumeana*, DC. ... ... „ 118
Burha, Ham. ... ... „ 39
calyculata, *Roxb.* ... ... „ 119
campanulata, *Roxb.* ... ... „ 118
campanulata, Bl. ... ... „ 118
carinata, *Wall.* ... ... „ 117
? *carinata*, Griff. ... ... „ 117
carinata, Thw. ... ... „ 120
coronaria, *Ham.* ... ... „ 117
costata, Roxb. ... ... „ 117
cuneata, *Br.* ... ... „ 120
cuneata, Br. ... ... „ 118
dasycarpa, *Kurz* ... ... „ 120
dasycarpa, Kurz ... ... „ 110
densa, DC. ... ... „ 109
densa, Wall. ... ... „ 109
Donia, Ham. ... ... „ 118
dumetorum, Retz. ... ... „ 110
enneandra, *Koen.* ... ... „ 119
erythroclada, *Kurz* ... ... „ 119
fasciculata, Roxb. ... ... „ 109

Gardenia Vol. Page
floribunda, Roxb. ... ... iii. 110
florida, Linn. ... ... ,, 115
fragrans, Koen. ... ... ,, 111
glabra, Br.... ... ... ,, 110
glutinosa, T. & B. ... ... ,, 117
Griffithi, *Hk. f.* ... ... ,, 118
gummifera, *Linn. f.* ... ,, 116
hygrophyla, Kurz ... ... ,, 115
inermis, Dietr. ... ... ,, 116
ixoræfolia, *Br.* ... ... ,, 119
latifolia, *Ait.* ... ... ,, 116
latifolia, Schlecht. ... ... ,, 110
latifolia, Thw. ... ... ,, 120
longispina, Roxb. ... ... ,, 110
longispina, Wall. ... iii 109, 118
lucida, *Roxb.* ... ... iii. 115
montana, DC. ... ... ,, 118
montanæ, Roxb. ... ... ,, 118
nutans, Roxb. ... ... ,, 110
obtusifolia, *Roxb.* ... ... ,, 116
oxycarpa, Br. ... ... ,, 119
parviflora, Wall. ... ... ,, 109
patula, Horsf. ... ... ,, 111
? *pomifera*, Wall. ... ... ,, 110
propinqva, Br. ... ... ,, 110
pubescens, Roth ... ... ,, 120
pulcherrima, Kurz ... ... ,, 114
resinifera, Korth. ... ... ,, 117
resinifera, Roth ... ... ,, 115
rigida, Wall. ... ... iii. 109, 135
sessiliflora, *Wall.* ... ... iii. 118
speciosa, *Hook.* ... ... ,, 117
spinosa, Linn. f. ... ... ,, 110
stipularis, Rottl. & Willd. ,, 110
suavis, Wall. ... ... ,, 116
tentaculata, *Hk.* ... ... ,, 119
tetrandra, Bedd. ... ... ,, 107
tetrasperma, Roxb. ... ... ,, 109
tomentosa, Bl. ... ... ,, 110
tubifera, *Wall.* ... ... ,, 117
turgida, *Roxb.* ... ... ,, 118
uliginosa, Retz. ... ... ,, 110
sp., Wall. ... ... iii. 109
GARDENIEÆ ... ... iii. 19, 101
Gardneria, *Wall.* ... ... iv. 93
angustifolia, *Wall.* ... ... ,, 93
nutans, Sieb. & Zucc. . . ,, 93
ovata, *Wall.* ... ... ,, 93
Wallichii, Wight ... ... ,, 93
Garhadiolus angulosus, J. & S. iii. 392
Hedypnois, J. & S. ... ... ,, 392
(lapsu *Gastradiolus*)
Garnotia, *Brongn.* ... ... vii. 241
angustata, Hack. ... ... ,, 243
arundinacea, *Hk. f.* ... ... ,, 243
ascendens, Munro ... ... ,, 243
courtallensis, *Thw.* ... ... ,, 244

Garnotia Vol. Page
Fergussonii, *Trim.* ... ... vii. 244
fuscata, *Thw.* ... ... ,, 244
Griffithii, Munro ... .. ,, 243
micrantha, *Thw.* ... ... ,, 244
patula, Munro ... ... ,, 243
patula, Thw. ... ... ,, 244
polygonoides, Duthie ... ,, 243
polypogonoides, *Munro* ... ,, 243
sandvicensis, Hillebr. ... ,, 243
Schmidii, *Hk. f.* ... ... ,, 242
scoparia, *Stapf* ... ... ,, 242
scoparia, Thw. ... ... ,, 241
stricta, *Brongn.* ... ... ,, 243
stricta, Thw. ... ... ,, 242
tectorum, *Hk. f.* ... ... ,, 242
tenuiglumis, *Stapf* ... ,, 242
Thwaitesii, *Stapf* ... ... ,, 241
Garuga, *Roxb.* ... ... i. 528
? *madagascariensis*, DC. ... ,, 528
pinnata, *Roxb.* ... ... ,, 528
Gastonia Nalugu (lapsu, *Gustonia*) ... ... i. 667
palmata, Roxb. ... ... ii. 732
Gastradiolus vide *Garhadiolus* iii. 392
Gastrochilus, *Wall.* ... ... vi. 217
affinis, Wall. ... ... ,, 218
Jenkinsii, Wall. ... ... ,, 218
longiflora, *Wall.* ... ... ,, 217
minor, *King* ... ... ,, 217
parvula, *Wall.* ... ... ,, 218
pulcherrima, *Wall.* ... ... ,, 217
rubrolutea, *Baker* ... ... ,, 218
speciosa, Kurz ... ... ,, 217
? tiliæfolia, *Baker* ... ... ,, 218
tillandsioides, *Baker* ... ,, 218
Gastrochilus, D. Don ... ... vi. 60
calceolaria, D. Don ... ,, 60
Gastrocotyle, *Bunge* ... ... iv. 168
hispida, *Bunge* ... ... ,, 168
Gastrodia, *Br.* ... ... vi. 122
elata, *Bl.* ... ... ,, 122
exilis, *Hk. f.* ... ... ,, 123
? Hasseltii, *Bl.* ... ... ,, 123
javanica, *Endl.* ... ... ,, 123
orobanchoides, *Benth.* ... ,, 122
Gastrosulum præcox, Schultz iii. 316
Gaultheria, *Linn.* ... ... iii. 456
discolor, Nutt ... ... ,, 459
fragrans, D. Don ... ... ,, 457
fragrantissima, *Wall.* ... ,, 457
Griffithiana, *Wight* ... ... ,, 458
hirsuta, Gardner .. ... ,, 458
Hookeri, *Clarke* ... ... ,, 458
Leschenaultii, DC. ... ... ,, 457
Nummulariæ, DC. ... ... ,, 457
nummularoides, *D. Don* ... ,, 457
ovalifolia, Wall. ... ... ,, 457

Gaultheria Vol. Page
punctata, Bl. ... iii. 457
pyrolæfolia, *Hk. f.* ... „ 457
repens, Bl. ... „ 457
trichophylla, *Royle* 457
sp., Griff. ... iii. 457, 460, 461
Gaylussaccia incurvata, Griff. iii. 450
serrata, Griff. ... iii. 450, 452
serrata, Lindl. ... iii. 452
sp., Griff. ... „ 450
Geanthus, Reinw. ... vi. 233
Geissaspis, *W. & A.* ... ii. 141
cristata, *W. & A.* ... „ 141
tenella, *Benth.* ... „ 141
Gela lanceolata, Lour. ... i. 498
Gelonium, *Roxb.* ... v. 458
angustifolium, Muell. ... „ 459
bifarium, *Roxb.* ... „ 459
bifarium, Wight ... „ 459
fasciculatum, Roxb. ... „ 459
glomerulatum, *Hassk.* ... „ 460
lanceolatum, *Willd.* ... „ 459
multiflorum, *A. Juss.* ... „ 459
obtusum, Miq. ... „ 460
Gemella trifolia, Lour. ... i. 674
Gendarussa bifaria, Wall. ... iv. 500
decussata, Nees ... „ 532
Neesiana, Wall. ... „ 531
orixensis, Nees ... „ 529
quadrifaria, Nees ... „ 530
? *sumatrana*, Miq. ... „ 534
tranquebariensis, Nees ... „ 530
vasculosa, Nees ... „ 534
ventricosa, Nees ... „ 526
virgata, Wall. ... „ 525
vulgaris, Nees ... „ 532
wynaadensis, Nees ... „ 533
Genianthus, *Hk. f.* ... iv. 15
crassifolius, *Hk. f.* ... „ 16
laurifolius, *Hk. f.* ... „ 16
Maingayi, *Hk. f.* ... „ 16
Geniosporum, *Wall.* ... iv. 609
axillare, Benth. ... „ 651
elongatum, *Benth.* ... „ 610
gracile, Benth. ... „ 610
parviflorum, Wall. ... „ 611
prostratum, *Benth.* ... „ 610
strobiliferum, *Wall.* ... „ 610
Geniostoma acuminatum, Wall. ... iii. 99
Genista versicolor, Wall. ... ii. 116
GENISTEÆ ... ii. 56
Gentiana, *Linn.* ... iv. 108
abscondita, Zenk. ... „ 111
adscendens, Pall. ... „ 117
amœna, *Clarke* ... „ 115
Andersoni, Clarke ... „ 113
aprica, Dcne. ... „ 112

Gentiana Vol. Page
aquatica, *Linn.* ... iv. 110
aquatica, Pall. ... „ 111
argentea, *Royle* ... iv. 112, 733
aurea, *Linn.* ... iv. 108
azurea, Bunge ... „ 109
Baconi, Edgew. ... „ 113
barbata, Froel. ... „ 118
borealis, *Bunge* ... „ 109
brachypetala, Bunge ... „ 118
cachemirica, *Dcne.* ... „ 115
canaliculata, Royle ... „ 119
capitata, *Ham.* ... „ 113
carinata, *Griseb.* ... „ 113
carinthiaca, Froel. ... „ 120
Centaurium, Linn. ... „ 101
cephalodes, Edgew. ... „ 113
Cherayta, Roxb. ... „ 124
Chirata, Wall. ... „ 124
ciliata, Pall. ... „ 118
contorta, *Royle* ... „ 118
coronata, *Royle* ... „ 114
crassa, *Kurz* ... „ 114
crinita, Froel. ... „ 118
dahurica, *Fisch.* ... „ 117
decemfida, *Ham.* ... „ 112
decumbens, *Linn. f.* ... „ 117
depressa, *D. Don* ... „ 115
detonsa, Fries ... iv. 118, 734
dichotoma, Pall. ... iv. 109
diffusa, Vahl ... „ 103
Elwesii, *Clarke* ... „ 115
Falconeri, Clarke ... „ 108
? *floribunda*, D. Don ... „ 124
glacialis, Thomas ... „ 109
heteroclita, Linn. ... „ 104
holosteoides, Sch. & Kotsch. „ 109
Hugelii, *Griseb.* ... „ 114
humilis, *Steven* ... „ 111
infelix, *Clarke* ... „ 111
involucrata, Fries ... „ 109
Jaeschkei, Kurz ... „ 119
Karelini, Thoms. ... „ 110
Koenigii, Gunn. ... „ 109
Kurroo, *Royle* ... „ 117
laxicaulis, Zoll. ... „ 111
Ledebourii, Rchb. f. ... „ 110
Loderi, *Hk. f.* ... „ 733
lutea, Linn. ... „ 118
marginata, Clarke ... „ 113
marginata, Griseb. ... „ 113
marginata, Wall. ... „ 113
micans, *Clarke* ... „ 112
minutissima, Boiss. ... „ 110
Moorcroftiana, *Wall.* ... „ 108
Moorcroftiana, Griseb. ... „ 119
nana, Wulf. ... „ 109
nubigena, *Edgew.* ... „ 116

Gentiana ... Vol. Page
nudicaulis, *Kurz* ... ... iv. 114
oligosperma, Griseb. ... „ 119
Olivieri, Griseb. ... ... „ 117
orbiculata, Heyne ... ... „ 111
ornata, *Wall.* ... ... „ 116
pedicellata, Wall. ... ... „ 111
pedunculata, Royle ... ... „ 109
phyllocalyx, *Clarke* ... „ 116
prostrata, Clarke ... ... „ 110
prostrata, Haencke ... ... „ 110
prostrata, Kar. & Kir. ... „ 110
pulmonaria, Turcz. ... ... „ 109
pumila, Griff. ... ... „ 111
pygmæa, *Clarke* ... ... „ 111
quadrifaria, *Bl.* ... ... „ 111
quinquefolia, Fl. Dan. ... „ 109
recurvata, *Clarke* ... ... „ 110
riparia, Kar. & Kir. ... „ 110
robusta, *King* ... ... „ 734
rotata, M. Bieb. ... ... „ 120
Royleana, Wall. ... ... „ 112
serrata, *Gunn.* ... ... „ 734
sikkimensis, *Clarke* ... „ 114
squarrosa, *Ledeb.* ... ... „ 111
Stelleriana, Cham. & Schl. „ 120
stipitata, Edgew. ... ... „ 115
Stoliczkai, Clarke ... ... „ 109
stylophora, *Clarke* ... .. „ 118
tenella, *Fries* ... ... „ 109
tetragona, Roth ... ... „ 109
Thomsoni, *Clarke* ... ... „ 109
tibetica, *King* ... ... „ 733
tristriata, Turcz. ... ... „ 109
tubiflora, *Wall.* ... ... „ 116
umbellata, Bieb. ... ... „ 109
venusta, *Wall* ... ... „ 116
verticillaris, Retz. ... ... „ 101
verticillata, Linn. ... ... „ 101
volubilis, D. Don ... ... „ 108
zeylanica, Griseb. ... ... „ 111
sp., Clarke iv. 110, 114, 115, 116
sp., Gmel. ... ... iv. 117
sp., Griff. ... ... iv. 111, 113, 122
sp., Hk. f. & T. ... iv. 109, 110, 111, 112, 114, 115, 117, 118, 127
GENTIANACEÆ ... . iv. 93
Gentianella barbata, G. Don. iv. 118
detonsa, G. Don ... ... „ 118
Geocallis fasciculata, Horan. vi. 241
Geodorum, *Jackson* ... ... vi. 16
appendiculatum, Griff. ... „ 18
attenuatum, Griff. ... ... „ 17
candidum, *Wall.* ... ... „ 17
candidum, Lindl. ... ... „ 18
citrinum, *Jacks.* ... ... „ 17
dilatatum, *Br.* ... ... „ 17
dilatatum, Lindl. ... ... „ 18

Geodorum ... Vol. Page
dilatatum, Wall. ... ... vi. 16
fucatum, Lindl. ... ... „ 18
javanicum, Lindl. ... ... „ 18
laxiflorum, *Griff.* ... ... „ 18
pallidum, *Wall.* ... ... „ 18
pallidum, Griff. ... ... „ 18
purpureum, *Br.* ... ... „ 16
rariflorum, Lindl. ... ... „ 18
recurvum, ... „ 187
semicristatum, Lindl. ... „ 18
sp., Griff. ... ... „ 18
Geophila, *D. Don* ... ... iii. 177
diversifolia, DC. ... ... „ 178
reniformis, *D. Don* ... „ 178
Georchis biflora, Lindl. ... vi. 114
cordata, Lindl. ... ... „ 114
foliosa, Lindl. ... ... „ 113
secundiflora, Griff., vide *Goodyera* ... ... „ 113
vittata, Lindl. ... ... „ 114
GERANIACEÆ ... ... i. 426
GERANIEÆ ... ... i. 426
Geranium, *Linn.* ... ... i. 428
aconitifolium, *L'Her.* ... „ 429
affine, W. & A. ... ... „ 431
ardjunense, Zoll. ... ... „ 431
Arnottianum, Steud. ... „ 431
Backhousianum, Regel ... „ 430
bicolor, Royle ... ... „ 433
choorense, Royle ... ... „ 433
collinum, *Bieb.* .. ... „ 429
Donianum, Hk. f. & T. .. „ 431
Donianum, Wall. ... ... „ 430
eriostemon, D. Don. ... „ 430
grandiflorum, Edgew. ... „ 430
Grevilleanum, *Wall.* ... „ 430
heterotrichon, Sm. ... ... „ 433
himalayense, Klotz. ... ... „ 429
lævigatum, Royle ... ... „ 433
? *Lamberti*, Sweet ... ... „ 430
? *Lawianum*, Grah. ... ... „ 427
Lindleyanum, Royle ... „ 433
lucidum, *Linn.* ... ... „ 433
molle, *Linn.* ... ... „ 432
multifidum, D. Don. ... „ 430
nepalense, *Sw.* ... ... „ 430
ocellatum, *Camb.* ... ... „ 433
pallidum, Royle ... ... „ 431
? palustre, *Linn.* ... ... „ 430
patens, Royle ... ... „ 431
pedunculatum, Royle ... „ 433
polyanthes, *Edgew. & Hk. f.* „ 431
potentilloides, Klotz. ... „ 432
pratense, *Linn.* ... ... „ 429
pusillum, *Linn.* ... ... „ 432
radicans, DC. ... ... „ 431
rectum, *Trautv.* ... ... „ 429

Vol. Page
Geranium
refractum, *Edgew & Hk. f.* i. 428
Robertianum, *Linn.* ... „ 432
rotundifolium, *Linn.* ... „ 432
sibiricum, *Linn.* ... ... „ 431
Tuberaria, *Camb.* ... ... „ 431
Wallichianum, *Sw.* ... ... „ 430
Gerardia dephinifolia, Linn. iv. 302
Heyneana, Benth. ... ... „ 302
parviflora, Wall. ... ... „ 303
scabra, Wall. ... ... „ 302
Sopubia, Benth. ... ... „ 302
stricta, Benth. ... ... „ 302
GERARDIEÆ ... ... iv. 248, 297
Gerbera, *Gronov.* ... ... iii. 389
anandria, Schultz ... ... „ 390
Kunzeana, *Braun & Asch.* „ 390
lanuginosa, *Benth.* ... ... „ 390
macrophylla, *Benth.* ... „ 391
nivea, *Benth.* ... ... „ 390
nivea, Clarke ... ... „ 390
ovalifolia, DC. ... ... „ 390
piloselloides, *Cass.* ... ... „ 389
Germainia, *Bal. & Poitr.* vii. 163, 421
capitata, Bal. & Poitr. ... „ 163
khasiana, *Hack.* ... ... „ 163
lanipes, *Hk. f.* ... ... „ 163
Germania Forskohlii, Poir.... iv. 625
nudiflora, Poir. ... ... „ 626
rotundifolia, Poir. ... ... „ 624
Gerontogea biflora, Cham. & Sch. ... ... iii. 64
GESNERACEÆ ... ... iv. 336
Gethyllis fusiformis, Ham. ... vi. 279
Getonia floribunda, Roxb. ... ii. 449
nitida, Roth ... ... „ 450
nutans, Roxb. ... ... „ 449
Geum, *Linn.* ... ... ii. 342
adnatum, Wall. ... ... „ 343
elatum, *Wall.* ... ... „ 343
Roylei, Wall. ... ... „ 342
urbanum, *Linn.* ... ... „ 342
Geunsia, *Blume* ... ... iv. 566
farinosa, *Bl.* ... ... „ 566
Gigantochloa, *Kurz* ... ... vii. 398
albo-ciliata, Kurz ... ... „ 401
andamanica, Kurz ... ... „ 401
auriculata, Kurz ... ... „ 396
heterostachya, *Munro* ... „ 400
Kurzii, *Gamble* ... ... „ 399
latispiculata, *Gamble* ... „ 400
ligulata, *Gamble* ... ... „ 400
macrostachya, *Kurz* ... „ 399
maxima, Kurz ... ... „ 398
nigro-ciliata, Kurz ... ... „ 401
Scortechinii, *Gamble* ... „ 398
verticillata, *Munro* ... ... „ 398
Wrayi, *Gamble* ... ... „ 399
Gilibertia Nalugu, DC. ... i. 667
palmata, DC. ... ... ii. 732
Giualloa, *Korth.* ... ... v. 228
andamanica, *Kurz* ... ... „ 228
Helferi, *Kurz* ... ... „ 228
spathulifolia, *Oliv.* ... ... „ 228
Girardinia, *Gaud.* ... ... v. 550
heterophylla, *Dcne.* ... „ 550
hibiscifolia, Miq. ... ... „ 551
Leschenaultiana, Dcne. ... „ 551
Gironniera, *Gaud* ... ... v. 485
costata, Miq. ... ... „ 485
cuspidata, Kurz ... ... „ 486
lucida, *Kurz* ... ... „ 486
nervosa, *Planch.* ... ... „ 485
parvifolia, *Planch.* ... ... „ 486
reticulata, *Thw.* ... ... „ 486
subæqualis, *Planch.* ... „ 485
subæqualis, Bedd. ... ... „ 485
Gisekia, *Linn.* ... ... ii. 664
linearifolia, Schum. ... „ 664
molluginoides, Wight ... „ 664
pharnaceoides, *Linn.* ... „ 664
Givotia, *Griff.* ... ... v. 395
rottleriformis, *Griff.* ... „ 395
Glabraria litoralis, Miq. ... v. 158
tersa, Linn. ... ... „ 158
Glaphyria sericea, Jack ... ii. 462
Glaux, *Tournef.* ... ... iii. 505
maritima, *Linn.* ... ... „ 505
Glechoma erecta, Roxb. ... iv. 661
hindostana, Roth ... ... „ 661
indica, Spreng.... ... ... „ 661
Gleditschia sinensis, Linn.... ii. 261
Gleniea (Glenniea), *Hk. f.* i. 682
zeylanica, *Hk. f.* i. 682, 685, 690
Glinus dictamnoides, Linn. ii. 662
dictamnoides, W. & A. ... „ 662
lotoides, Linn. ... ... „ 662
Mollugo, Fenzl ... ... „ 662
mucronata, Klotz ... ... „ 661
parviflora, Wall. ... ... „ 662
trianthemoides, Heyn. ... „ 661
Globba, *Linn.* ... ... vi. 201
Andersoni, *Clarke* ... ... „ 202
arracanensis, *Kurz* ... „ 203
brachycarpa, *Baker* ... „ 205
bracteata, Heyne ... ... „ 206
bracteolata, *Wall.* ... ... „ 204
bracteosa, Horan. ... ... „ 206
bulbifera, *Roxb.* ... ... „ 206
canarensis, *Baker* ... ... „ 206
Careyana, Roxb. ... ... „ 203
cernua, *Baker* ... ... „ 205
Clarkei, *Baker* ... ... „ 201
elongata, King ... ... „ 203
erecta, Red. ... ... „ 254

Globba Vol. Page
expansa, Wall. ... ... vi. 204, 205
floribunda, *Baker* ... ... vi. 203
Hookeri, *Clarke* ... ... „ 202
Hura, Roxb. ... ... „ 205
Kingii, *Baker* ... ... „ 204
maculata, Bl. ... ... „ 205
marantina, *Linn.* ... ... „ 206
marantina, Wall. ... ... „ 206
marantinoides, Wight ... „ 206
multiflora, *Wall.* ... ... „ 202
multiflora, Wall. ... ... „ 205
nutans, Linn. ... ... „ 256
ophioglossa, *Wight* ... ... „ 202
orixensis, *Roxb.* ... ... „ 201
orixensis, Wall. vi. 201, 202, 203
pallidiflora, *Baker* ... ... vi. 204
pauciflora, *King* ... ... „ 205
pendula, *Roxb.* ... ... „ 205
pendula, Wall. ... ... „ 202
platystachya, *Baker* ... „ 206
purpurea, Andr. ... ... „ 200
racemosa, *Sm.* ... ... „ 201
radicalis, Roxb. ... ... „ 200
saltatoria, Rosc. ... ... „ 200
Schomburgkii, Hk. f. ... „ 206
sessiliflora, *Sims* ... ... „ 203
spathulata, Roxb. ... ... „ 201
stenothyrsa, *Baker* ... ... „ 204
strobilifera, Zoll. & Moritz. „ 206
subscaposa, *Coll. & Hemsl.* „ 204
substrigosa, *King* ... ... „ 202
subulata, Roxb. ... ... „ 200
uliginosa, *Miquel* . ... „ 203
velutina, Wall. ... ... „ 202
versicolor, *Sm.* ... ... „ 205
Wallichii, *Baker* ... ... „ 202
Glochidion, *Forst.* ... ... v. 305
acuminatum, *Muell.* ... „ 323
andamanicum, *Kurz* ... „ 322
arboreum, *Wight* .. ... „ 316
assamicum, *Hk. f.* ... ... „ 319
bancanum, Miq. ... ... „ 311
brachylobum, *Muell.* ... „ 313
brunneum, *Hk. f.* ... ... „ 312
calocarpum, *Kurz* ... ... „ 309
canaranum, Miq. ... ... „ 311
canarum, Bedd. ... ... „ 311
Candolleanum, Hk. f. ... „ 316
coccineum, *Muell.* ... ... „ 308
coriaceum, *Thw.* ... ... „ 321
coriaceum, Thw. ... v. 313, 316
coronatum, *Hk. f.* ... ... v. 326
Curtisii, *Hk. f.* ... ... „ 327
Daltoni, *Kurz* ... ... „ 320
dasyphyllum, Miq. ... ... „ 323
dasystylum, *Kurz* ... ... „ 327
desmocarpum, *Hk. f.* ... „ 318

Glochidion Vol. Page
desmogyne, *Hk. f.* ... ... v. 310
distichum, Hance ... ... „ 317
diversifolium, Bedd. ... „ 321
ellipticum, *Wight* ... ... „ 321
fagifolium, *Miq.* ... ... „ 312
frondosum, Baill. ... ... „ 292
Gamblei, *Hk. f.* ... ... „ 310
Gardneri, *Thw.* ... ... „ 325
glaucifolium, *Muell.* ... „ 321
glaucogynum, Bedd. ... „ 325
goniocarpum, *Hk. f.* .. „ 309
Helferi, *Hk. f.* ... ... „ 311
Heyneanum, *Wight* ... „ 323
hirsutum, *Muell.* ... ... „ 311
Hohenackeri, *Bedd.* ... „ 314
insulare, *Hk. f.* ... ... „ 310
Johnstonei, *Hk. f.* ... ... „ 314
Jussieuianum, Thw. ... „ 320
khasicum, *Hk. f.* ... ... „ 324
lævigatum, *Hk. f.* ... ... „ 319
lanceolarium, *Dalz.* ... „ 308
leiostylum, *Kurz* ... ... „ 324
leptogynum, Bedd. ... ... „ 325
littorale, *Bl.* ... ... „ 308
macrostigma, *Hk. f.* ... „ 313
malabaricum, *Bedd.* ... „ 319
microbotrys, *Hk. f.* ... „ 319
mishmiense, *Hk. f.* ... ... „ 327
montanum, *Thw.* ... ... „ 325
Moonii, *Thw.* ... ... „ 325
multiloculare, *Muell.* ... „ 307
nanogynum, *Hk. f.* ... ... „ 318
neilgherrense, *Wight* ... „ 316
nemorale, *Thw.* ... ... „ 324
nitidum, Dalz. & Gibs. ... „ 311
nubigenum, *Hk. f.* ... ... „ 315
oblatum, *Hk. f.* ... ... „ 312
obliquum, Dcne. ... ... „ 311
obscurum, *Bl.* ... ... „ 317
perakense, *Hk. f.* ... ... „ 317
Perrottetianum, Bedd. ... „ 316
pycnocarpum, *Bedd.* ... „ 315
Ralphii, *Hk. f.* .. .. „ 314
rigidum, *Muell.* ... ... „ 320
Roxburghianum, Muell. ... „ 317
sclerophyllum, *Hk. f.* ... „ 313
sericeum, *Hk. f.* ... ... „ 326
sphærogynum, *Kurz* ... „ 317
subscandens, Kurz ... ... „ 312
superbum, *Baill.* ... ... „ 323
symplocoides, Bedd. ... „ 325
Thomsoni, *Hk. f.* ... ... „ 318
Thwaitesii, Muell. ... ... „ 320
tomentosum, *Dalz.* ... ... „ 309
velutinum, *Wight* ... ... „ 322
villicaule, *Hk. f.* ... ... „ 326
Wallichianum, *Muell.* ... „ 315

Glochidion Vol. Page
zeylanicum, *A. Juss.* ... v. 310
Glochidiopsis sericea, Bl. ... v. 326
Glochisandra acuminata, Wight ... ... v. 308
Glomera, *Bl.* ... v. 823, vi. 178
Gloriosa, *Linn.* ... ... vi. 358
Doniana, Schultes f. ... „ 358
simplex, D. Don ... ... „ 358
superba, *Linn.* ... ... „ 358
Glossanthus grandiflorus, Benth. ... ... iv. 371
malabaricus, Klein ... ... „ 366
Notonianus, Br.... ... ... „ 366
zeylanicus, Br. ... ... „ 367
Glossocardia, *Cass.* ... ... iii. 308
Bosvallia, DC. ... ... „ 308
linearifolia, *Cass.* ... ... „ 308
Glossocarya, *Wall.* ... ... iv. 598
Linnæi, *Benth.* ... ... „ 598
mollis, *Wall.* ... ... „ 598
Glossocomia clematidea, Fisch. iii. 433
tenera, D. Don ... ... „ 432
thalictrifolia, Wall. ... ... „ 432
Glossogyne ... ... iii. 310
pinnatifida, *DC.* ... ... „ 310
Glossonema, *Dcne.* ... ... iv. 16
varians, *Benth.* ... ... „ 16
Glossospermum ? cordatum, Wall. ... ... i. 374
? quinque-alatum, Wall. ... „ 393
velutinum, Wall. ... ... „ 374
Glossostelma, Wight ... ... iv. 47
Glossostigma, *Arn.* ... ... iv. 287
spathulatum, *Arn.* ... ... „ 288
Glossostylis arvensis, Benth... iv. 297
Glossula Tentacula, Lindl. ... vi. 163
Gluta, *Linn.* ... ... ii. 21
coarctata, *Hk. f.* ... ... „ 22
elegans, *Hk. f.* ... ... „ 22
tavoyana, *Hk. f.* ... ... „ 22
travancorica, *Bedd.* ... „ 22
Glyceria, *Br.* ... ... vii. 346
airoides, Rchb. ... ... „ 310
aquatica, J. & C. Presl ... „ 310
caspica, Griseb. ... ... „ 347
convoluta, Fries ... ... „ 347
distans, *Wahlb.* ... ... „ 347
fluitans, Br. ... ... „ 347
fluitans, Duthie ... ... „ 346
poaeoides, *Stapf* ... ... „ 348
rivularis, Jacq.... ... ... „ 346
scaberrima, Steud. ... ... „ 330
soongarica, Schrenk... ... „ 338
Thomsoni, *Stapf* ... ... „ 347
tonglensis, *Clarke* ... ... „ 346
Glycine, *Linn.* ... ... ii. 183
aurea, Willd. ... ... „ 221

Glycine Vol. Page
cana, Willd. ... ... ii. 222
capitata, Heyne ... ... „ 221
cylindriflora, Wall. ... ... „ 182
debilis, DC. ... ... „ 184
densiflora, Roth ... ... „ 226
elongata, Roth ... ... „ 221
ferruginea, Grah. ... ... „ 182
filiformis, Wall.... ... ... „ 192
flaccida, Wall. ... ... „ 63
flexilis, Grah. ... ... „ 185
Grahami, Wall. ... ... „ 191
involucrata, Wall. ... ii. 181, 182
javanica, *Linn.*... ... ... ii. 183
labialis, Linn. ... ... „ 184
leptocarpa, Grah. ... ... „ 63
lucida, Grah. ... ... „ 192
Memnonia, Delile ... ... „ 224
mollis, W. & A. ... ... „ 184
monophylla, Burm. ... ... „ 153
nummularia, Linn. ... ... „ 221
oxyphylla, Grah. ... ... „ 192
pallens, Grah. ... ... „ 184
parviflora, Lam. ... ... „ 184
parviflora, Wall. ... ... „ 184
pentaphylla, *Dalz.* ... ... „ 184
pondicheriensis, Spreng.... „ 220
rhombifolia, Willd. ... ... „ 223
rufescens, Willd. ... ... „ 220
senegalensis, DC. ... ... „ 184
Soja, *Sieb. & Zucc.* ... ... „ 184
suaveolens, Linn. ... ... „ 222
suffulta, Wall. ... ... „ 182
tenerrima, Grah. ... ... „ 184
tenuiflora, Wall. ... ... „ 192
tenuiflora, Willd. ... ... „ 192
uniflora, Dalz. ... ... „ 210
vestita, Grah. ... ... „ 181
viscida, Willd. ... ... „ 154
warreensis, Dalz. ... ... „ 184
Glycosmis, *Correa* ... ... i. 499
angustifolia, Lindl. ... ... „ 500
arborea, DC. ... ... „ 500
bilocularis, *Thw.* ... ... „ 500
chlorosperma, Spreng. ... „ 501
chylocarpa, W. & A. ... „ 500
crenulata, *Turcz.* ... ... „ 501
macrocarpa, Wight ... ... „ 500
macrophylla, Lindl.... ... „ 500
nitida, W. & A.... ... ... „ 500
pentaphylla, *Correa* ... „ 499
puberula, *Lindl.* ... ... „ 501
Retzii, Rœm. ... ... „ 500
sapindoides, *Lindl.* ... ... „ 501
triphylla, Wight ... ... „ 500
Glycycarpus racemosus, Dalz. ii. 40
Glyptopetalum, *Thw.* ... ... i. 612
grandiflorum, *Bedd.* ... „ 613

Glyptopetalum ... Vol. Page
sclerocarpum, *Kurz* ... i. 313
zeylanicum, *Thw.* ... ,, 612
Gmelina, *Linn.* ... iv. 581
arborea, *Linn.* ... ,, 581
asiatica, *Linn.* ... ,, 582
asiatica, Wall. ... ,, 582
coromandeliana, Burm. ... ,, 582
Finlaysoniana, Wall. ... ,, 582
Hystrix, *Kurz* ... ,, 582
inermis, Blanco ... ,, 582
lobata, Gaertn. ... ,, 582
oblongifolia, *Roxb.* ... ,, 582
parviflora, Roxb. ... ,, 582
parvifolia, Roxb. ... ,, 582
Rheedii, Hook. ... ,, 581
speciosissima, D. Don iv. 257, 583
villosa, *Roxb.* ... iv. 582
sp., Griff. ... ,, 582
Gnaphalium, *Linn.* ... iii. 288
adnatum, Wall. ... ,, 282
affine, D. Don ... ,, 288
albo-luteum, Roxb. ... ,, 288
ammophilum (*anemophilum*), Wall. ... ,, 278
brevifolium, Thw. ... ,, 287
Busua, Ham. ... ,, 283
canum, Wall. ... ,, 280
chrysanthum, Sch. ... ,, 290
cinnamomeum, Sch. ... ,, 286
cinnamomeum, Wall. ... ,, 281
confusum, DC. ... ,, 288
contortum, Ham. ... ,, 285
crispatulum, Clarke ... ,, 289
crispatulum, Del. ... ,, 290
cuneifolium, Wall. ... ,, 280
cylindrostachyum, Wall. ... ,, 275
cynoglossoides, Sch. ... ,, 291
cynoglossoides, Trev. ... ,, 281
? *decurrens*, Ham. ... ,, 283
depressum, Roxb. ... ,, 289
flaccidum, *Kurz* ... ,, 290
Hamiltoni, Wall. ... ,, 264
Hookerianum, Thw. ... ,, 291
hurdwaricum, Wall. ... ,, 277
hypoleucum, *DC.* ... ,, 288
indicum, *Linn.* ... ,, 289
indicum, Thw. ... ,, 283
intermedium, Wall. ... ,, 280
luteo-album, *Linn.* ... ,, 288
macranthum, Sch. Bip. ... ,, 290
marcescens, Wight ... ,, 286
martabanicum, Wall. ... ,, 288
multicaule, Roxb. ... ,, 289
multiceps, Wall. ... ,, 288
muscoides, Desf. ... ,, 287
neelgerrianum, DC. ... ,, 287
nilagiricum, Sch. ... ,, 287
Gnaphalium ... Vol. Page
nilaicum, Raddi ... iii. 289
Notonianum, Wall. ... ,, 284
nubigenum, Wall. ... ,, 280
orixense, Roxb. ... ,, 288
pallidum, Ham. ... ,, 288
perfoliatum, Wall. ... ,, 281
prostratum, Roxb. ... ,, 289
pulchellum, Wall. ... ,, 279
pulvinatum, *Del.* ... ,, 289
purpureum, *Linn.* ... ,, 289
ramigerum, DC. ... ,, 288
semidecurrens, Wall. ... ,, 283
simplicicaule, Wall. ... ,, 285
spathulatum, Del. ... ,, 289
spicatum, Vahl ... ,, 278
Stewartii, *Clarke* ... ,, 289
strictum, Roxb. ... ,, 289
subdecurrens, DC. ... ,, 283
tenellum, Wall. ... ,, 285
Thomsoni, *Hk. f.* ... ,, 290
uliginosum, Clarke ... ,, 290
? *villosissima*, vide *Antennaria* ... ,, 283
Wightianum, DC. ... ,, 286
Wightianum, Thw. iii. 281, 282, 291
Wightii, Thw. ... iii. 284
sp., Wall. ... iii. 284, 291
GNETACEÆ ... v. 640
Gnetum, *Linn.* ... v. 641
apiculatum, Griff. ... ,, 642
Brunonianum, Griff. ... ,, 642
edule, Bl. ... ,, 643
funiculare, *Bl.* ... ,, 643
funiculare, Wight ... ,, 643
Gnemon, *Linn.* ... ,, 641
gnemonoides, Brongn. ... ,, 643
Griffithii, Parlat. ... ,, 642
latifolium, Parlat. ... ,, 643
macropodum, *Kurz* ... ,, 643
macrostachyum, *Hk. f.* ... ,, 642
microcarpum, Bl. ... ,, 642
? neglectum, *Bl.* ... ,, 642
pyrifolium, Miq. ... ,, 643
scandens, *Roxb.* ... ,, 642
Ula, Brongn. ... ,, 643
sp., Wall. ... ,, 643
Gnidia eriocephala, Meissn. v. 197
insularis, Gardn. ... ,, 197
monticola, Miq. ... ,, 197
sisparensis, Gardn. ... ,, 197
Gochnatia spectabilis, Less. iii. 387
Goebelia alopecuroides, Bunge ii. 250
Goldbachia, *DC.* ... i. 166
lævigata, *DC.* ... ,, 166
torulosa, DC. ... ,, 166
Goldbachia, Trin. ... vii.
Mikani, Trin. ... ,, 73

Vol. Page
Goldfussia anisophylla, Nees iv. 462
  biceps, Nees ... ,, 459
  biceps, Wall. ... ,, 429
  bracteata, Nees ... iv. 443, 460
  capitata, Nees ... iv. 459
  colorata, Nees ... ,, 473
  crinita, Nees ... ,, 473
  Cusia, Nees ... ,, 468
  Dalhousieana, Nees ... ,, 460
  decurrens, Wight ... ,, 440
  discolor, Nees ... ,, 462
  divaricata, Nees ... ,, 469
  Edgeworthiana, Nees ... ,, 466
  extensa, Nees ... ,, 463
  flexuosa, Nees ... ,, 460
  glomerata, Nees ... ,, 448
  isophylla, Nees ... ,, 462
  lamiifolia, Nees ... ,, 463
  Leschenaultiana, Nees iv. 433, 439
  Myrtinia, Nees ... iv. 437
  nutans, Nees ... ,, 454
  pentstemonoides, Nees ... ,, 460
  sessilis, Nees ... ,, 461
  Thomsoni, Hook. ... ,, 471
  tristis, Wight ... ,, 441
  Zenkeriana, Nees ... ,, 439
  Zenkeriana, Wight ... ,, 440
  sp., Griff. ... ,, 469
  sp., Hk. f. & T. iv. 461, 462, 463, 469, 471, 472
Golowninia japonica, Maxim. iv. 107
Gomphandra, *Wall.* ... i. 585
  affinis, *Mast.* ... ,, 586
  axillaris, *Wall.* ... ,, 586
  coriacea, Wight ... ,, 586
  ? crassipes, *Mast.* ... ,, 587
  penangiana, *Wall.* ... ,, 587
  polymorpha, *Wight* ... ,, 586
  polymorpha, Wight ... ,, 586
  tomentella, *Mast.* ... ,, 587
Gomphia, *Schreb.* ... i. 525
  angustifolia, *Vahl* ... ,, 525
  Hookeri, *Planch.* ... ,, 525
  malabarica, DC. ... ,, 525
  sumatrana, *Jack* ... i. 525, 527
  sumatrana (*sumatrensis*), Planch. ... i. 525
  umbellata, *Hk. f.* ... ,, 526
  zeylanica, DC. ... ,, 525
Gomphocarpus lævigatus, Ham. ... iv. 65
  volubilis, Ham. ... ,, 21
Gomphogyne, *Griff.* ... ii. 632
  cissiformis, *Griff.* ... ,, 632
  heterosperma, *Kurz* ... ,, 632
Gomphostemma, *Wall.* ... iv. 696
  acaule, *Kurz* ... ,, 696
Gomphostemma Vol. Page
  crinitum, *Wall.* ... iv. 698
  eriocarpum, *Benth.* ... ,, 698
  Heyneanum, Wall. ... ,, 696
  lucidum, *Wall.* ... ,, 697
  Mastersii, *Benth.* ... ,, 699
  melissæfolium, *Wall.* ... ,, 698
  milissæfolium, Wall. ... ,, 699
  membranifolium, Miq. ... ,, 694
  multiflorum, Benth. ... ,, 697
  niveum, *Hk. f.* ... ,, 697
  nutans, *Hk. f.* ... ,, 697
  oblongum, *Wall.* ... ,, 697
  oblongum, Wight ... ,, 698
  ovatum, *Wall.* ... ,, 699
  parviflorum, *Wall.* ... ,, 697
  pedunculatum, *Benth.* .. ,, 696
  strobilinum, *Wall.* ... ,, 696
  Thomsonii, *Benth.* ... , 698
  velutinum, *Benth.* ... ,, 699
  viride, Wall. ... ,, 696
Gomphostylis candida, Wall. v. 141
Gomphrena, *Linn.* ... iv. 732
  angustifolia, Vahl ... ,, 732
  globosa, *Linn.* ... ,, 732
  hispida, Linn. ... ,, 732
  sessilis, Linn. ... ,, 731
GOMPHRENEÆ ... iv. 714
Gomutus obtusifolia, Bl. ... vi. 421
  saccharifer, Spreng. .. ,, 421
Gonatanthus, *Klotz.* ... vi. 522
  Griffithii, Schott ... ,, 520
  ? ornatus, *Schott* ... ,, 522
  sarmentosus, *Klotz.* ... ,, 522
Gonatostemon Boucheanum, Regel ... iv. 358
Gongronema, *Dcne.* ... iv. 33
  columnare, Dcne. ... ,, 33
  ? Finlaysonii, *Dcne.* ... ,, 34
  nepalense, *Dcne.* ... ,, 33
  sagittatum, Dcne. ... ,, 33
  ventricosum, *Hk. f.* ... ,, 34
  Wallichii, *Dcne.* ... ,, 33
Goniocarpus micranthus, Kœn. & Sims ... ii. 430
  scaber, Kœn. & Sims ... ,, 431
  tetragynus, Labill. ... ,, 431
Goniocaulon, *Cass.* ... iii. 377
  glabrum, *Cass.* ... ,, 377
  indicum, Clarke ... ,, 377
Goniogyna hebecarpa, DC. ... ii. 65
  latebrosa, DC. ... ,, 65
  leiocarpa, DC. ... ,, 65
Onioscypha, *Baker* ... vi. 326
  eucomoides, *Baker* ... ,, 326
Goniostemma acuminatum, Wight ... iv. 15
Goniothalamus, *Bl.* ... i. 72

Goniothalamus Vol. Page
cardiopetalus, *Hk. f. & T.* i. 75
fulvus, *Hk. f. & T.* ... ... „ 75
Gardneri, *Hk. f. & T.* ... „ 73
giganteus, *Hk. f. & T.* ... „ 75
Griffithii, *Hk. f. & T.* ... „ 73
Hookeri, *Thw.* ... ... „ 73
macrophyllus, *Hk. f. & T.* „ 74
malayanus, *Hk. f. & T.* ... „ 75
reticulatus, *Thw.* ... ... „ 75
salicinus, *Hk. f. & T.* ... „ 76
sesquipedalis, *Hk. f. & T.* „ 73
Simonsii, *Hk. f. & T.* ... „ 74
Stingelandtii, Scheff. ... „ 75
Thomsoni, *Thw.* ... ... „ 74
Thwaitesii, *Hk. f. & T.* ... „ 72
Walkerii, *Hk. f. & T.* ... „ 74
Wightii, *Hk. f. T.* ... ... „ 76
wynaadensis, *Bedd.* ... ... „ 74
Gonocarpus micranthus, Thunb. ... ... ii. 430
Gonocaryum ? gracile, Miq. ... i. 590
Gonostegia oppositifolia, Turcz. ... ... v. 583
Gonotheca Blumei, DC. ... iii. 70
Gonyanthes ? candida, *Bl.* ... v. 665
nepalensis, Miers ... ... „ 666
pusilla, Miers ... ... „ 665
Wallichii, Miers ... ... „ 666
Gonystylus, *Teijsm. & Binn.* v. 200
bancanus, Baill. ... ... „ 201
Maingayi, *Hk. f.* ... ... „ 200
Miquelianus, Teijsm. & Binn. „ 201
GOODENOVIEÆ ... ... iii. 420
Goodyera, *Br.* ... ... vi. 110, 179
biflora, *Hk. f.* ... ... vi. 114
carnea, A. Rich. ... ... „ 111
cordata, *Benth.* ... ... „ 114
discolor, Ker. ... ... „ 101
elongata, Lindl. ... ... „ 116
flabellata, A. Rich. ... ... „ 106
foliosa, *Benth.* ... ... „ 113
fumata, *Thw.* ... ... „ 111
fusca, *Hk. f.* ... ... „ 112
gracilis, *Hk f.* ... ... „ 112
hirsuta, Griff. ... ... „ 94
hispida, *Lindl.* ... ... „ 114
marginata, Lindl. ... ... „ 112
ovalifolia, Wight ... ... „ 115
Prainii, *Hk. f.* ... ... „ 112
procera, *Hook.* ... ... „ 111
recurva, *Lindl.* ... ... „ 112
repens, *Br.* ... ... „ 111
robusta, *Hk. f.* ... ... „ 113
rubens, *Bl.* ... ... „ 111
secundiflora, *Lindl.* ... „ 113
secundiflora, Griff. (lapsu *Georchis*) ... ... „ 113

Goodyera Vol. Page
vittata, *Benth.* ... ... vi. 113
sp., Griff. ... vi. 105, 113, 115, 116
Gordonia, *Ellis* ... ... i. 290
acuminata, Wall. ... i. 282, 290
anomala, *Spreng.* ... ... i. 292
Chilaunia, Ham. ... ... „ 289
decandra, Roxb. ... ... „ 417
elliptica, *Gardn.* ... ... „ 291
excelsa, *Bl.* ... ... „ 291
floribunda, Wall. ... ... „ 289
integrifolia, Roxb. ... ... „ 289
Maingayi, *Dyer* ... ... „ 291
mollis, Wall. ... ... „ 288
oblata, Roxb. ... ... „ 289
obtusa, *Wall.* ... ... „ 291
obtusifolia, Wight ... ... „ 291
parvifolia, Wight ... ... „ 291
? *peduncularis*, Wall. ... „ 416
reticulata, Wall. ... ... „ 282
singaporiana, Wall. ... ... „ 291
speciosa, *Thw.* ... ... „ 292
superba, Hk. f. & T. ... „ 289
Wallichii, DC. ... ... „ 289
zeylanica, *Wight* ... ... „ 291
sp., Griff. ... ... „ 289
GORDONIEÆ ... ... i. 279
Gossampinus rubra, Ham. ... i. 349
Gossypium, *Linn.* ... ... i. 346
acuminatum, Roxb. ... ... „ 347
album, W. & A. ... ... „ 346
arboreum, Linn. ... ... „ 347
barbadense, Linn. ... ... „ 347
herbaceum, *Linn.* ... ... „ 346
hirsutum, Linn. ... ... „ 347
indicum, Lamk. ... ... „ 346
micranthum, DC. ... ... „ 346
nigrum, Ham. ... ... „ 347
nigrum, W. & A. ... ... „ 347
obtusifolium, Roxb. ... ... „ 347
peruvianum, Cav. ... ... „ 347
religiosum, Parl. ... ... „ 347
religiosum, Roxb. ... ... „ 347
rubicundum, Roxb. ... ... „ 347
Stocksii, *Mast.* ... ... „ 346
vitifolium, Lamk. ... ... „ 347
vitifolium, Roxb. ... ... „ 347
Gouania, *Linn.* ... ... i. 643
integrifolia, Kurz ... ... „ 643
lanceolata, Wall. ... ... „ 644
leptostachya, *DC.* ... ... „ 643
microcarpa, *DC.* ... ... „ 643
napalensis, *Wall.* ... ... „ 644
tiliæfolia, Heyne ... ... „ 643
GOUANIEÆ ... ... i. 630
Gouffeia crassiuscula, Camb. i. 241
Goughia Griffithiana, Wight v. 353
himalensis, Benth. ... ... „ 354

Goughia Vol. Page
laurina, Benth. ... ... v. 353
neilgherrensis, Wight ... ,, 354
Govania nivea, Wall. ... ... v. 395
Govindovia nervosa, Wight... vi. 92
Gracilea, *Kœn.* ... ... vii. 283
nutans, *Kœn.* ... ... ,, 283
Royleana, *Hk. f.* ... ... ,, 284
GRAMINEÆ ... ... vii. 1
Gramin. Griff. ... ... vii. 307
Gramin. Wall. ... vii. 242, 243, 271, 273, 312
Grammatophyllum, *Bl.* ... vi. 18
affine, Griff. ... ... ,, 19
fastuosum, Lindl. ... ... ,, 18
? *Finlaysonianum*, Lindl. ,, 20
macranthum, Rchb. f. ... ,, 18
paludosum, Griff. ... ... ,, 19
scandens, Griff. ... ... ,, 19
speciosum, *Bl.* ... ... ,, 18
Grammica aphylla, Lour. ... iv. 227
Granatum littoreum, Rumph i. 567
Grangea, *Forsk.* ... ... iii. 246
latifolia, Lamk. ... ... ,, 245
maderaspatana, *Poir.* ... ,, 247
sphæranthus, Koch. ... ... ,, 247
Grantia Aucheri, Boiss. ... iii. 296
globosa, Griff. ... ... vi. 558
microscopica, Griff. ... ... ,, 558
Graphaphorum nutans, Munro ... ... vii. 312, 422
Graptophyllum, *Nees* ... ... iv. 545
hortense, *Nees* ... ... ,, 545
pictum, Griff. ... ... ,, 545
Gratiola, *Linn.* ... ... iv. 273
amara, Roxb. ... ... ,, 275
aphylla, Roth ... ... ,, 274
aromatica, Pers. ... ... ,, 268
aspera, Roth ... ... ,, 279
chamædrifolia, *Lamk.* ... ,, 273
Chamædrys, *Roth* ... ... ,, 273
ciliata, Colsm. ... ... ,, 285
ciliata, Kœn. ... ... ,, 285
cordifolia, Vahl ... ... ,, 282
cuneifolia, Roxb. ... ... ,, 274
goodeniæfolia, Hornem. ... ,, 259
grandiflora, Roxb. ... ... ,, 285
Griffithii, *Hk. f.* ... ... ,, 273
hyssopioides, Linn. ... ... ,, 283
hyssopioides, Roxb. ... ... ,, 274
integrifolia, Roxb. ... ... ,, 281
inundata, Kit. ... ... ,, 281
juncea, Roxb. ... ... ,, 274
lobelioides, Retz. ... ... ,, 274
lucida, Heyne ... ... ,, 266
lucida, Vahl ... ... ,, 279
marginata, Colsm. ... ... ,, 285
minima, Roth ... ... ,, 286
Gratiola Vol. Page
Monniera, Linn. ... ... iv. 272
nudicaulis, Willd. ... ,, 274
oppositifolia, Roxb. ... ... ,, 286
parviflora, Roxb. ... ... ,, 283
pulegiifolia, Vahl ... ... ,, 285
pusilla, Willd. ... ... ,, 281
racemosa, Roth ... ... ,, 285
racemosa, Roxb. ... ... ,, 285
reptans, Roxb. ... ... ,, 285
rotundifolia, Linn. ... ... ,, 284
Roxburghiana, R. & S. ... ,, 285
ruelloides, Kœn. ... ... ,, 285
serrata, Roxb. ... ... ,, 284
strigosa, *Roth* ... ... ,, 273
tenuifolia, Vahl... ... ... ,, 286
trifida, Willd. ... ... ,, 271
verbenæfolia, Colsm. ... ,, 285
veronicæfolia, Retz. ... ... ,, 285
virginiana, Linn. ... ... ,, 271
GRATIOLEÆ ... ... iv. 247, 258
Grayia elegans, Nees ... ... vii. 246
zeylanica, Arn. ... ... ,, 246
Greenea, *W. & A.* ... ... iii. 41
Jackii, *W. & A.* ... ... ,, 41
Wightiana, *W. & A.* ... ,, 41
Grewia, *Linn.* ... ... i. 383
abutilifolia, *Juss.* ... ... ,, 390
acuminata, Juss. ... ... ,, 389
affinis, Hask. ... ... ,, 393
affinis, Lindl. ... ... ,, 393
angustifolia, Wall. ... ... ,, 391
araria, Wall. ... ... ,, 386
arborea, Roth ... ... ,, 386
asiatica, *Linn.* ... ... ,, 386
asiatica, Wall. ... ... i. 387, 390
aspera, Roxb. ... ... i. 390
begonifolia, Wall. ... ... ,, 393
betulæfolia, Juss. ... ... ,, 385
bicolor, Juss. ... ... ,, 386
bicolor, Roth ... ... ,, 385
biloba, Wall. ... ... ,, 391
bipartita, Wall. ... ... ,, 388
Blumei, Hassk. ... ... ,, 393
bracteata, *Roth*... ... ... ,, 389
bracteata, Miq. ... ... ,, 383
calophylla, *Kurz* ... ... ,, 392
carpinifolia, *Juss.* ... ... ,, 387
carpinifolia, Roth ... ... ,, 384
carpinifolia, Roxb. ... ... ,, 388
carpinifolia, Wall. ... ... ,, 383
Carrea, Ham. ... ... ,, 387
? *caudata*, Wall. ... ... ,, 379
columnaris, *Sm.* ... ... ,, 383
commutata, DC. ... ... ,, 388
coriacea, Garcke ... ... ,, 388
corylifolia, Guill. & Perr. ,, 388
didyma, Roxb. ... ... ,, 389

Grewia Vol. Page
  diplocarpa, *Thw.* i. 390
  disperma, Rottl. „ 389
  elastica, Royle „ 387
  emarginata, *W. & A.* „ 384
  excelsa, *Vahl* „ 385
  ferruginea, Hochst. „ 389
  fibrocarpa, *Mast.* „ 391
  flavescens, Juss. „ 388
  glabra, Jack „ 393
  globulifera, *Mast.* „ 391
  helicterifolia, Wall. „ 391
  heteroclita, Roxb. „ 379
  heterotricha, *Mast.* „ 385
  hirsuta, *Vahl* „ 391
  hirsuta, Wall. „ 391
  humilis, Wall. „ 390
  involucrata, Wall. „ 384
  involucrata, Wight „ 388
  lævigata, *Vahl* „ 389
  Lalpeta, Ham. „ 389
  lanceæfolia, Grah. „ 391
  ? *lanceæfolia*, Roxb. „ 391
  lanceolata, Hb. Heyne „ 391
  latifolia, *Mast.* „ 392
  laurifolia, *Hook.* „ 392
  laurifolia, Hook. v. 136
  longifolia, Ham. i. 391
  macrophylla, G. Don „ 390
  Microcos, *Linn.* „ 392
  microstemma, *Wall.* „ 390
  mollococca, Ham. „ 389
  multiflora, *Juss.* „ 388
  nana, Wall. „ 387
  obliqua, Roxb. „ 387
  obtecta, Wall. „ 387
  obtusa, Wall. i. 383, 384, 389
  odorata, Bl. „ 389
  oppositifolia, *Roxb.* „ 384
  orbicularis, G. Don „ 386
  orbiculata, *Rottl.* „ 386
  orbiculata, G. Don „ 388
  orbiculata, Wall. „ 386
  orientalis, *Linn.* „ 384
  orientalis, Gærtn. „ 388
  orientalis, Vahl „ 383
  orientalis, Wall. „ 384
  ovalifolia, Juss. „ 389
  ovalifolia, Wight „ 384
  paniculata, *Roxb.* „ 393
  pedicellata, Roxb. „ 385
  pilosa, *Lamk.* „ 388
  pilosa, Roxb. „ 391
  pilosa, Wall. i. 383, 384, 387, 389, 390
  polygama, *Roxb.* i. 391
  populifolia, *Vahl* „ 385
  pumila, Ham. „ 387
  retusifolia, Kurz „ 390

Grewia Vol. Page
  rhamnifolia, Roth i. 384
  rigida, Ham. „ 385
  Ritchiei, *Mast.* „ 389
  Rothii, DC. „ 385
  rotundifolia, Juss. „ 386
  Roxburghii, G. Don „ 391
  rugosa, Wall. „ 393
  salvifolia, *Heyne* „ 386
  salvifolia, Roxb. „ 385
  salvifolia, Wall. „ 391
  sapida, *Roxb.* „ 387
  saxatilis, Ham. „ 391
  scabrida, *Wall.* „ 389
  scabrida, Wall. „ 388
  scabrophylla, *Roxb.* „ 387
  sclerophylla, Wall. „ 387
  sepiaria, Roxb. „ 388
  serrulata, DC. „ 388
  sinuata, *Wall.* „ 392
  subinæqualis, DC. „ 386
  subinæqualis, Wall. „ 386
  suffruticosa, Ham. „ 387
  sulcata, Wall. „ 387
  Sulcoria, Ham. „ 391
  tiliæfolia, *Vahl* „ 386
  ulmifolia, Roxb. „ 392
  umbellata, *Roxb.* „ 385
  umbellifera, *Bedd.* „ 393
  variabilis, Wall. „ 386
  vestita, Wall. „ 387
  villosa, *Willd.* „ 388
  viminea, Wall. „ 391
GREWIEÆ i. 380
Griffithia curvata, Kurz iii. 111
  fragrans, W. & A. „ 111
  Gardneri, Thw. „ 112
  rugulosa, *Thw.* „ 113
  siamensis, Miq. „ 111
  speciosa, Bedd. „ 113
  sp., Hk. f. & T. iii. 112, 113
Grislea micropetala, Hochst. ii. 572
  punctata, Ham. „ 572
  tomentosa, Roxb. „ 572
  uniflora, Rich. „ 572
Grona, *Lour.* ii. 191
  Dalzellii, *Baker* „ 191
  filicaulis, *Kurz* „ 191
  Grahami, *Benth.* „ 191
Grosourdya Hystrix, Rchb. f. vi. 39
Grumilea affinis, Thw. iii. 167
  aurantiaca, Miq. „ 165
  elongata, Wight „ 163
  Gardneri, Thw. „ 161
  Junghuhniana, Miq. ii. 166
  longifolia, Bedd. „ 171
  Moonii, Thw. „ 170
  ? *nigra*, Gaertn. „ 162

Grumilea Vol. Page
nudiflora, Thw. ... ... ii. 162
patens, Schlecht. ... ... „ 162
polycarpa, Miq. ... ... „ 165
stenophylla, Thw. ... ... „ 161
subintegra, W. & A. ... ... „ 162
vaginans, Dalz. ... ... „ 176
Wightiana, Thw. ... ... „ 167
Grymania, Presl ... ... ii. 309
Guarea acuminata, Wall. ... i. 547
Alliaria, Ham. ... ... „ 548
? *Amaris*, Ham. ... ... „ 546
binectarifera, Roxb. ... ... „ 546
disyphonia, Griff. ... „ 547
Gobara, Ham. ... ... „ 547
Gotadhora, Ham ... ... „ 546
grandis, Wall. ... ... „ 547
mollis, Wall. ... ... „ 548
oblonga, Wall. ... ... „ 547
oblongifolia, Griff. ... ... „ 567
paniculata, Roxb. ... ... „ 552
paniculata, Wall. ... ... „ 548
procera, Wall. ... ... „ 547
Guatteria acutiflora, Wall. ... i. 64
acutifolia, Wall. ... ... „ 89
bifaria, A. DC. ... ... „ 62
biglandulosa, Bl. ... ... „ 65
brevipetala, Miq. ... ... „ 66
? *caudata*, Wall. ... ... „ 85
cerasoides, Dun. ... ... „ 64
cinnamomea, Wall. ... ... „ 65
coffeoides, Thw. ... ... „ 62
cordata, Dun. ... ... „ 49
costata, Hk. f. & T. ... ... „ 67
fasciculata, Wall. ... ... „ 63
? *flavicans*, Wall. ... ... iii. 562
fragrans, Dalz. ... ... i. 63
globosa, A. DC. ... ... „ 87
Jenkinsii, Hk. f. & T. ... „ 64
Korinti, Dun. 64
laurifolia, Grah. ... ... „ 95
longifolia, Wall. ... ... „ 62
macrophylla, Bl. ... ... „ 66
malabarica, Dun. ... ... „ 51
membranacea, A. DC. ... „ 68
micrantha, A. DC. ... ... „ 51
montana, DC. ... ... „ 51
multinervis, Wall. ... ... „ 65
nitida, A. DC. ... ... „ 64
pallida, Hk. f. & T. ... ... „ 67
persicæfolia, Hk. f. & T. ... „ 66
ramosissima, Wall. ... ... „ 68
sesquipedalis, Wall. ... .. „ 73
simiarum, Ham. ... ... „ 63
suberosa, DC. ... ... „ 65
unonæfolia, A. DC. ... ... „ 71
velutina, A. DC. ... ... „ 87
Guazuma, *Plum.* ... ... i. 375
Guazuma Vol. Page
tomentosa, *Kunth* ... ... i. 375
ulmifolia, Wall. ... ... „ 375
Guettarda, *Linn.* ... ... iii. 126
Brunonis, Wall. ... ... „ 127
Finlaysoniana, Wall. ... „ 127
missionis, Wall. ... ... „ 127
? *peduncularis*, Wall. ... „ 127
peduncularis, Wall. ... ... „ 127
speciosa, *Linn.* ... ... „ 126
sp., Wall. ... ... „ 41
GUETTARDEÆ ... ... iii. 20, 126
Guilandina axillaris, Lamk. ii. 258
Bonduc, Linn. ... ... „ 255
Bonduc, W. & A. ... ... „ 254
Bonducella, Linn. ... ... „ 254
glabra, Mill. ... . „ 255
macrocarpa, Grah. ... ... „ 258
Moringa, Linn. ... ... „ 45
Nuga, Linn. ... ... „ 255
Wallichiana, Grah. ... ... „ 268
Guizotia, *Cass.* ... ... iii. 307
abyssynica, *Cass.* ... ... „ 308
oleifera, DC. ... ... „ 308
Guldenstaedtia, *Fisch.* ... ii. 117
cuneata, Benth. ... ... „ 117
himalaica, *Baker* ... ... „ 117
mirpourensis, *Benth.* ... „ 118
multiflora, *Bunge* ... ... „ 118
Gumira integrifolia, Hassk. iv. 574
littorea, Rumph. ... ... „ 574
Gumsia chloroxylon, Ham. ... i. 371
hirta, Ham. ... ... „ 370
tiliacea, Wall. ... ... „ 371
Gunisanthus, A. DC. ... ... iii. 553
mollis, Kurz ... ... „ 554
pilosulus, A. DC. ... ... „ 554
Gurua obovata, Ham. ... ... iv. 7
Gussonea cyperoides, Presl ... vi. 650
pauciflora, Brong. ... ... „ 649
Gustavia valida, DC. ... ... ii. 511
Gustonia, vide *Gastonia* ... i. 667
Guttifera ... ... i. 266, 267
GUTTIFERÆ ... ... i. 258
Gymnadenia Chusua, Lindl. vi. 127
cylindrostachya, Lindl. ... „ 142
galeandra, Rchb. f. ... ... „ 164
Helferi, Rchb. f. ... ... „ 164
longifolia, Lindl. ... ... „ 141
obcordata, Rchb. f. ... ... „ 164
Orchidis, Lindl. ... ... „ 142
platyphylla, Lindl. ... ... „ 141
puberula, Lindl. ... ... „ 127
secunda, Lindl. ... ... „ 160
spathulata, Lindl. ... ... „ 127
? *tenuiflora*, Lindl. ... ... „ 163
? *tenuis*, Lindl. ... ... „ 156
violacea, Lindl. ... ... „ 142

Vol. Page
Gymnandra, Pall. ... ... iv. 558
borealis, Maxim. ... ... ,, 560
cashmerianus, Royle ... ,, 560
globosa, Kurz ... ... ,, 558
kunawurensis, Royle & Chois. ... ... ,, 560
Pallasii, Maxim. ... ... ,, 560
spectabilis, Kurz ... ... ,, 560
Stelleri, Hk. f. & T. ... ,, 559
Stelleri, Maxim. ... ... ,, 560
stolonifera, Koch ... ... ,, 558
Gymnanthelia connata, Aschers. & Schweinf. ... vii. 205
lanigera, Anderss. ... ... ,, 203
Martini, Anderss. ... ... ,, 204
? *Gymnanthemum acuminatum*, Steetz ... ... iii. 239
extensum, Steetz ... ... ,, 239
Metzianum, Schultz ... ,, 234
molle, Schultz ... ... ,, 228
phyllolænum, Schultz ... ,, 228
reticulatum, Schultz ... ,, 227
scandens, Steetz ... ... ,, 241
vagans, Steetz ... ... ,, 241
Gymnema, *Br.* ... ... iv. 28
acuminatum, *Wall.* ... ... ,, 30
affine, Dcne. ... ... ,, 29
aurantiacum, Wall. ... ... ,, 63
columnare, Wall. ... ... ,, 33
Decaisneanum, Wight ... ,, 29
elegans, *W. & A.* ... ... ,, 32
Finlaysonii, Wight ... ... ,, 34
glabrum, *Wight* ... ... ,, 30
hirsutum, *W. & A.* ... ... ,, 29
hirsutum, Wall. ... ... ,, 43
lactiferum, *Br.* ... ... ,, 30
lactiferum, Br. ... ... ,, 31
latifolium, *Wall.* ... ... ,, 30
? macranthum, *Hk. f.* ... ,, 733
Maingayi, *Hk. f.* ... ... ,, 31
malayanum, Griff. ... ... ,, 31
melicida, Edgew. ... ... ,, 29
molle, *Wall.* ... ... ,, 29
montanum, *Hk. f.* ... ... ,, 31
nepalense, ? Grah ... ... iii. 668
nepalense, Wall. ... ... iv. 33
nitens, Bl. ... ... ,, 31
parviflorum, Wall. ... ... ,, 29
pergularioides, *Wight & Gardn.* ... ... ,, 32
rotundatum, *Thw.* ... ... ,, 30
sagittatum, Wall. ... iv. 33, 45
stenoloba, *Hk. f.* ... ... iv. 32
sylvestre, *Br.* ... ... ,, 29
tenacissima, Spreng... ... ,, 35
? Thomsoni, *Hk. f.* ... ... ,, 32
tingens, *W. & A.* ... ... ,, 31
Gymnema Vol Page
Wallichii, Wight ... iv. 33, 45
zeylanicum, Dcne. ... ... iv. 31
Gymnocarpos fruticosus, Pers. iv. 712
Gymnopetalum, *Arn.* ... ... ii. 611
? *calyculatum*, Miq. ... ... ,, 616
cochinchinense, *Kurz* ... ,, 611
? *heterophyllum*, Kurz ... ,, 611
Horsfieldii, Miq. ... ... ,, 631
integrifolium, *Kurz* ... ,, 612
piperifolium, Miq. ... ... ,, 631
quinquelobum, *Miq.* ... ,, 611
Wightii, *Arn.* ... ... ,, 611
zeylanicum, Arn. ... ... ,, 611
sp., Hk. f. & T. ... ii. 612, 632
Gymnopogon digitatus, Nees vii. 290
rigidus, Thw. ... ... ,, 300
Gymnosporia, *W. & A.* ... i. 618
acuminata, *Hk. f.* i. 619, iii. 508, 511
emarginata, *Thw.* ... ... i. 621
Falconeri, *Laws.* ... ... ,, 620
fruticosa, *Thw.* ... ... ,, 619
Heyneana, *Laws.* ... ... ,, 620
montana, *Benth.* ... ... ,, 621
neglecta, *Laws.* ... ... ,, 619
oblanceolata, *Laws.* ... ,, 619
ovata, *Laws.* ... ... ,, 619
puberula, *Laws.* ... ... ,, 619
Rothiana, *Laws.* ... ... ,, 620
Royleana, *Laws.* ... ... ,, 620
rufa, *Laws.* ... ... ,, 620
rugulosa, *Laws.* ... ... ,, 620
salicifolia, *Laws.* ... ... ,, 619
Wallichiana, *Laws.* ... ... ,, 621
Gymnostachyum, *Nees* ... iv. 507
alatum, Wight ... ... ,, 508
andrographioides, T. Anders ... ... ,, 502
canescens, *T. Anders.* ... ,, 509
ceylanicum, *Arn. & Nees*... ,, 508
febrifugum, *Benth.* ... ... ,, 508
glabrum, *T. Anders.* ... ,, 509
hirsutum, *T. Anders.* ... ,, 510
latifolium, *T. Anders.* ... ,, 509
leptostachyum, *Nees* ... ,, 509
longifolia, T. Anders. ... ,, 509
ovatum, T. Anders. ... ... ,, 502
paniculatum, *T. Anders.* ,, 508
Parishii, T. Anders. ... ,, 502
polyanthum, *Wight* ... ,, 508
sanguinolentum, *T. Anders.* ,, 510
serrulatum, T. Anders. ... ,, 509
Thwaitesii, *T. Anders.* ... ,, 508
tomentosum, *T. Anders.* ... ,, 510
venustum, *T. Anders.* ... ,, 507
Gymnostemma trigyna (vide *Gynostemma*) ... ... i. 663
Gymnothrix Alopecuros, Nees vii. 84

Gymnothrix Vol. Page
cenchroides, R. & S. ... vii. 84, 85
compressa, Brongn. ... ... vii. 85
flaccida, Munro ... ... „ 84
hordeiformis, Nees ... ... „ 85
hordeoides, Kunth ... ... „ 86
japonica, Kunth ... ... „ 85
longiglumis, Munro ... ... „ 85
nigricans, Presl ... ... „ 85
purpurascens, Sw. ... ... „ 85
Thouarii, Beauv. ... ... „ 88
Thouarii, Ham.... ... ... „ 87
Thouarii, Steud. ... ... „ 88
? *sp.*, Wall. ... ... vii. 84, 85
Gynaion vestitum, A. DC. ... iv. 139
Gynandropsis, *DC.* ... ... i. 170
pentaphylla, *DC.* ... ... „ 171
Gynocardia, *Br.* ... ... i. 195
odorata, *Br.* ... ... „ 195
Gynocephalum bracteatum, Tréc. ... ... i. 592
giganteum, Tréc. ... ... „ 591
oblongum, Tréc. ... ... „ 592
palmatum, Tréc. ... ... „ 592
Gynochthodes, *Bl.* ... ... iii. 160
coriacea, Miq. ... ... „ 160
macrophylla, *Kurz* ... ... „ 160
sublanceolata, *Miq.* ... „ 160
Gynoon Heyneanum, W. & A. v. 323
Jussieuianum, Wight ... „ 320
rigidum, A. Juss. ... ... „ 320
triandrum, W. & A. .. „ 320
Gynopachis axilliflora, Miq. iii. 112
oblongata, Miq. ... ... „ 112
Gynopogon breviflorum, *Kurz* ... ... iii. 637
lanceolatum, Kurz ... ... „ 637
stellatum, Labill. ... ... „ 636
Gynostemma, *Bl.* ... ... ii. 633
cissoides, Bth. & Hk. f. ... „ 633
pedata, *Bl.* ... ... „ 633
pedata, Bth. & Hk. f. ... „ 633
trigyna, Laws. ... ... i. 663
Wightiana, Bth. & Hk. f.... ii. 633
Gynotroches, *Bl.* ... ... ii. 440
axillaris, *Miq.* ... ... „ 440
Dryptopetalum, Bl. ... ... „ 440
reticulata, A. Gray ... ... „ 440
Gynura, *Cass.* ... ... iii. 333
angulosa, *DC.* ... ... „ 334
aurantiaca, DC. ... iii. 333, 335
auriculata, Cass. ... ... iii. 335
auriculata, Clarke ... ... „ 335
bicolor, *DC.* ... ... „ 335
ecalyculata, DC. ... ... „ 336
Finlaysoniana, DC. ... ... „ 335
fœtens, DC. ... ... „ 333
glabrata, Clarke ... ... „ 335
Gynura Vol. Page
hispida, Thw. ... ... iii. 335
lycopersicifolia, *DC.* ... „ 334
nepalensis, *DC.* ... ... „ 333
nitida, *DC.* ... ... „ 333
nudicaulis, Arn. ... ... „ 334
Pseudo-china, *DC.* ... ... „ 334
Pseudo-china, Benth. ... „ 335
purpurascens, DC. ... ... „ 335
sarmentosa, *DC.* ... ... „ 335
simplex, Dalz. & Gibs. iii. 333, 334
sinuata, DC. ... ... iii. 334
Walkeri, Wight ... ... „ 337
Gypsophila, *Linn.* ... ... i. 216
cerastioides, *D. Don* ... „ 217
erinacea, Boiss. ... ... „ 216
sedifolia, *Kurz* ... ... „ 217
Stewartii, *Thoms.* ... ... „ 216
tibetica, Hk. f. & T. ... ... „ 217
Vaccaria, W. & A. ... ... „ 217
Gyrandra laurina, Wall. ... v. 353
Gyrinops, *Gaertn.* ... ... v. 199
Walla, *Gaertn.* ... ... v. 199, 862
sp., Benth. ... ... v. 200
GYROCARPEÆ ... ... ii. 443
Gyrocarpus, *Jacq.* ... ... ii. 461
acuminatus, Meissn. ... „ 461
americanus, Jacq. ... ... „ 461
asiaticus, Willd. ... ... „ 461
Jacquini, *Roxb.* ... ... „ 461
rugosus, R. Br. ... ... „ 461
sphenopterus, R. Br. ... „ 461
Gyrostachys australis, Bl. ... vi. 102

Haasia cuneata, Nees ... ... v. 125
incrassata, Nees ... ... „ 126
nitida, Meissn. ... ... v. 126, 145
oppositifolia, Meissn. ... v. 124
peduncularis, Nees ... v. 126, 144
Wightii, Nees ... ... v. 124
Habenaria, *Willd.* ... ... vi. 131
acuifera, *Wall.* ... ... „ 146
acuminata, *Thw.* ... ... „ 133
affinis, *Wight* ... ... „ 149
affinis, D. Don ... ... „ 166
Aitchisoni, *Rchb. f.* ... „ 152
andamanica, *Hk. f.* ... ... „ 134
arcuata, *Hk. f.* ... ... „ 155
arietina, *Hk. f.* ... ... „ 138
aristata, *Hk. f.* ... ... „ 158
avana, *Hk. f.* ... ... „ 148
barbata, *Wight* ... ... „ 133
bicornuta, *Hk. f.* ... ... „ 156
brachyphylla, Aitch. & Hemsl. ... ... „ 152
brachyphylla, Rchb. f. ... „ 151
Brandisii, *Hk. f.* ... ... „ 162
breviloba, *Hk. f.* ... ... „ 159

Habenaria Vol. Page
candida, Dalz. ... vi. 148
carajensis, *Dalz.* ... „ 166
Cephalotes, *Lindl.* ... „ 139
chlorina, *Par. & Rchb. f.* vi. 147, 197
ciliolaris, Kranz. ... vi. 144
commelinifolia, *Wall.* ... „ 143
concinna, *Hk. f.* ... „ 155
constricta, *Hk. f.* ... „ 161
corymbosa, *Par. & Rchb. f.* „ 136
crassifolia, *A. Rich.* ... vi. 151, 197
crinifera, *Lindl.* ... vi. 142
cubitalis, *Br.* ... „ 157
decipiens, *Wight* ... vi. 141, 197
decipiens, Hk. f. ... vi. 165, 197
densa, *Wall.* ... vi. 153
dichopetala, *Thw.* ... „ 136
digitata, *Lindl.* ... „ 134
diphylla, *Dalz.* ... „ 151
ditricha, *Hk. f.* ... „ 151
dolichostachya, *Thw.* ... „ 135
elliptica, *Wight* ... „ 147
ensifolia, Lindl. ... „ 137
fimbriata, Wight ... „ 139
flavescens, *Hk. f.* ... „ 150
foliosa, A. Rich. ... „ 135
furcifera, *Lindl.* ... „ 149
furfuracea, *Hk. f.* ... „ 144
fusifera, *Hk. f.* ... „ 147
galeandra, *Benth.* ... „ 163
Gardneri, *Hk. f.* ... „ 158
geniculata, *D. Don* ... „ 138
Gerardiana, Wall. ... „ 137
Gibsoni, *Hk. f.* ... „ 135
gigantea, D. Don ... „ 137
gigas, *Hk. f.* ... „ 160
glabra, A. Rich. ... „ 148
goodyeroides, *D. Don* ... „ 161
goodyeroides, Hook. ... „ 162
gracillima, *Hk. f.* ... „ 163
gracilis, Coleb. ... „ 166
graminea, Lindl. ... „ 151
graminea, A. Rich. ... „ 150
grandiflora, *Lindl.* ... „ 136
Griffithii, *Hk. f.* ... „ 197
hamigera, Griff. ... „ 149
Hamiltoniana, *Hk. f.* ... „ 160
Helferi, *Hk. f.* ... „ 164
Heyneana, *Lindl.* ... „ 148
intermedia, *D. Don* ... „ 138
jantha, *Benth.* ... „ 164
Jerdoniana, Wight ... „ 152
Josephi, Rchb. f. ... „ 152
khasiana, *Hk. f.* ... „ 151
Kingii, *Hk. f.* ... „ 144
lacertifera, *Benth.* ... „ 163
laciniata, Dalz. ... „ 135
latifolia, Lindl. ... „ 140

Habenaria Vol. Page
latilabris, *Hk. f.* ... vi. 153
Lawii, *Hk. f.* ... „ 162
leptocaulon, *Hk. f.* ... „ 154
leptoceras, Hook. ... „ 166
Lindleyana, *Steud.* ... „ 140
Lindleyana, Wight ... „ 135
Linguella, Lindl. ... „ 146
Lobbii, *Rchb. f.* ... „ 166
longibracteata, *Hk. f.* ... „ 166
longicalcarata, *A. Rich.* vi. 141, 197
longicorniculata, Grah. ... vi. 141
longicornu, *Lindl.* ... vi. 139, 197
longifolia, *Ham.* ... vi. 141
lucida, *Wall.* ... „ 133
lutea, Benth. ... „ 164
macroceratitis, Rottl. ... „ 141
macrostachya, *Lindl.* ... „ 134
malabarica, *Hk. f.* ... „ 159
malleifera, *Hk. f.* ... „ 143
Mandersii, *Hemsl. & Coll.* „ 146
marginata, *Coleb.* ... „ 150
modesta, *Dalz.* ... „ 166
monophylla, *Coll. & Hemsl.* „ 143
montana, A. Rich. ... vi. 139, 197
montana, Wight ... vi. 141, 197
muricata, Vidal ... vi. 144
Murtoni, *Hk. f.* ... „ 144
nematocaulon, *Hk. f.* ... „ 154
oligantha, *Hk. f.* ... „ 154
Orchidis, *Hk. f.* ... „ 142
ovalifolia, *Wight* ... „ 149
pachycaulon, *Hk. f.* ... „ 154
Parishii, *Hk. f.* ... „ 161
pectinata, *D. Don* ... „ 137
pectinata, Lindl. ... „ 138
pelorioides, *Par. & Rchb. f.* „ 166
peristyloides, Wight ... „ 156
Perrottetiana, *A. Rich.* ... „ 164
plantaginea, *Lindl.* ... „ 141
platyphylla, *Spreng.* ... „ 140
polyodon, *Hk. f.* ... „ 139
Prainii, *Hk. f.* ... „ 159
promensis, Wall. ... „ 150
pterocarpa, *Thw.* ... „ 145
pubescens, *Lindl.* ... „ 144
rariflora, *A. Rich.* ... „ 136
reniformis, *Hk. f.* ... „ 152
rhynchocarpa, *Hk. f.* ... „ 145
Richardiana, *Wight* ... „ 139
robustior, *Hk. f.* ... „ 160
rostrata, *Wall.* ... „ 146
rotundifolia, Lindl. ... „ 136
Schischmareffiana, Cham. „ 130
schizochilus, Grah. ... „ 142
secundiflora, *Hk. f.* ... „ 165
sikkimensis, *Hk. f.* ... „ 155
spatulæfolia, *Par. & Rchb. f.* „ 145

- Habenaria — Vol. Page
  - stenantha, *Hk. f.* ... ... vi. 153
  - stenopetala, *Lindl.* ... ... „ 134
  - ? *stenopetala*, Lindl.... ... „ 145
  - stenostachya, *Benth.* ... „ 156
  - Stocksii, *Hk. f.*... ... ... „ 158
  - suaveolens, *Dalz. & Gibs.* „ 140
  - subpubens, *A. Rich.* ... „ 148
  - Susannæ, *Br.* ... ... „ 137
  - *Sutleri*, Rchb. f. ... ... „ 152
  - *tenuicornis*, Wall. ... ... „ 149
  - *tenuis*, Griff. ... ... „ 150
  - tipulifera, *Par. & Rchb. f.* „ 157
  - torta, *Hk. f.* ... ... „ 159
  - travancorica, *Hk. f.* ... „ 135
  - trichosantha, *Wall.*... ... „ 138
  - triflora, *D. Don* ... ... „ 142
  - trifurcata, *Hk. f.* ... ... „ 148
  - *trinervia*, Wight ... ... „ 135
  - *uniflora*, Dalz. ... ... „ 137
  - *uniflora*, D. Don ... ... „ 166
  - *uniflora*, Griff. ... ... „ 167
  - urceolata, *Clarke* ... ... „ 165
  - vidua, *Par. & Rchb. f.* ... „ 146
  - viridiflora, *Br.* ... ... „ 150
  - Wightii, *Trim.* ... ... „ 162
  - zosterostyloides, *Hk. f.* ... „ 155
  - *sp.*, Griff. ... ... „ 138
- *Habzelia*, A. DC. ... ... i. 83
  - *ferruginea*, Hk. f. & T. ... „ 83
  - *oxyantha*, Hk. f. & T. ... „ 83
- Haemaria, *Lindl.* ... vi. 101, 179
  - discolor, *Lindl.* ... ... vi. 101
- Hæmatocarpus, *Miers* ... ... i. 106
  - *comptus*, Miers (*lapsu* F.) „ 106
  - *incusus*, Miers (*lapsu* F.) „ 106
  - Thomsoni, *Miers* ... ... „ 106
- *Hæmatorchis altissima*, Bl. ... vi. 89
- *Hæmatospermum cuneatum*, Wall. ... ... v. 456
  - *neriifolium*, Wall. ... ... „ 455
  - *riparium*, Wall. ... ... „ 455
  - *salicinum*, Baill. ... ... „ 455
- HÆMODORACEÆ ... ... vi. 264
- Halenia ... ... iv. 130
  - elliptica, *D. Don* ... ... „ 130
  - Perrottetii, *Griseb.* ... ... „ 130
  - *sibirica*, Borckh. ... ... „ 130
- *Halimocnemis sulphurea*, Moq. v. 20
- *Hallia hirta*, Willd. ... ... ii. 65
  - *sororia*, Willd. ... ... „ 153
  - *trifoliata*, Roth... ... ... „ 220
- Halocharis, *Moq.* ... ... v. 19
  - ? sulphurea, *Moq.* ... ... „ 19
  - violacea, *Bunge* ... ... „ 19
- *Halodendron Thouarsii*, R. & S. iv. 604
- *Halodule australis*, Miq. ... vi. 570
- Halogeton, *C. A. Mey.* ... v. 20
- Halogeton — Vol. Page
  - glomeratus, *C. A. Mey.* ... v. 20
  - *tibeticus*, Bunge ... ... „ 20
- Halophila, *Thouars* ... ... v. 663
  - *Beccarii*, Asch. ... ... vi. 570
  - *ovalis*, Hk. f. ... ... v. 663
  - ovata, *Gaud.* ... ... „ 663
  - *stipulacea*, Asch. ... ... „ 664
- Halopyrum, *Stapf* ... vii. 328, 421
  - mucronatum, *Stapf* ... vii. 328
- HALORAGEÆ... ... ... ii. 430
- Haloragis, *Forst.* ... ... ii. 430
  - *disticha*, Jack. ... ... „ 442
  - micrantha, *Br.*... ... ... „ 430
  - *oligantha*, Arn. ... ... „ 431
  - *oligantha*, W. & A. ... ... „ 433
  - *scabra*, Benth. ... ... „ 430
  - *tenella*, Brongn. ... ... „ 430
  - tetragyna, *Hk. f.* ... ... „ 430
- *Halostemma*, Wall. ... ... vi. 681
- Haloxylon, *Bunge* ... ... v. 15
  - *Griffithii* ? Hk. f. & T. ... „ 16
  - multiflorum, *Bunge*... ... „ 16
  - recurvum, *Bunge* ... ... „ 15
  - *recurvum*, Hk. f. ... ... „ 15
  - salicornicum, *Bunge* ... „ 16
  - *Stocksii*, Hk. f. ... ... „ 15
  - Thomsoni, *Bunge* ... ... „ 16
- *Hamamelidea*, Griff. ii. 427, v. 186
- HAMAMELIDEÆ ... ... ii. 425
- *Hamamelis chinensis*, Br. ... ii. 428
- *Hamatris triphylla*, Salisb. vi. 289
- Hamiltonia, *Roxb.* ... ... iii. 197
  - *mysorensis*, W. & A. ... „ 197
  - *propinqua*, Dcne. ... ... „ 197
  - suaveolens, *Roxb.* ... ... „ 197
  - *suaveolens*, D. Don ... ... „ 198
- *Hanguana*, Bl. ... ... vi. 391
- *Hapale*, Schott ... ... vi. 521
- Hapaline, *Schott* ... ... vi. 521
  - Benthamiana, *Schott* ... „ 521
  - Brownii, *Hk. f.*... ... ... „ 521
- *Hapalocarpum indicum*, Miq. ii. 569
  - *vesicatorium*, Miq. ... ... „ 569
- *Hapalosa Lœflingiæ*, Wall. ... i. 245
- Haplanthus, *Nees* ... ... iv. 506
  - ? hygrophiloides, *T. Anders.* „ 507
  - *nilgherrensis*, Wight ... „ 507
  - *plumosa*, T. Anders.... ... „ 507
  - *tener*, Nees ... ... „ 502
  - tentaculatus, *Nees* ... ... „ 507
  - verticillaris, *Nees* ... ... „ 506
  - *sp.*, Hk. f. & T. ... ... „ 507
- *Haplostylis*, Nees ... ... vi. 669
  - *Meyenii*, Nees ... ... „ 668
  - *Wightiana*, Nees ... ... „ 669
- *Haplotaxis*, see *Aplotaxis* ... iii. 377
- HAPLOZYGIÆ ... ... ii. 665

Vol. Page
Hardwickia, *Roxb.* ... ... ii. 270
  binata, *Roxb.* ... ... „ 270
  pinnata, *Roxb.* ... ... „ 270
Harina caryotoides, Ham. ... vi. 419
  nana, Griff. ... ... „ 420
  oblongifolia, Griff. ... ... „ 419
Harlandia bryonioides, Hance ii. 625
Harnieria dimorphocarpa, Solms ... ... iv. 531
Harpullia, *Roxb.* ... ... i. 691
  cupanoides, *Roxb.* ... ... „ 692
  imbricata, Thw. ... ... „ 692
Harrachia speciosa, Jacq. ... iv. 492
Harrisonia, *Br.* ... ... i. 519
  Bennetii, *Hk. f.* ... ... „ 519
  Brownii ?, Kurz ... ... „ 519
Hartighsea Alliaria, Arn. ... „ 548
  Gobara, W. & A. ... ... „ 547
  ramiflora, Griff. ... ... „ 549
Hartwegia Nimmonii, Dalz. vi. 336
Hasskarlia leucacantha, Walp. vi. 485
Hastingia coccinea, Sm. ... iv. 596
  scandens, Roxb. ... ... „ 596
Hebradendron cambogioides, Grah. ... ... i. 265
  Choisyanum, Chois. ... ... „ 265
  Wallichii, Chois. ... ... „ 265
Heckeria subpeltata, Kunth v. 95
Hedeoma nepalensis, Benth. iv. 647
Hedera, *Linn.* ... ... ii. 739
  aculeata, D. Don ... ... „ 738
  acuminata, Wight ... ... „ 727
  æsculifolia, Wall. ... ... „ 738
  ? *Aralia*, Jack ... ... „ 732
  confluens, Wall. ... ... „ 732
  disperma, DC. ... ... „ 738
  elata, Ham. ... ... „ 728
  emarginata, Moon ... ... „ 729
  exaltata, Thw. ... ... „ 730
  ferruginea, Wall. ... ... „ 732
  floribunda, Wall. ... ... „ 737
  fragrans, D. Don ... ... „ 725
  glauca, Wall. ... ... „ 724
  glomerulata, D.C. ... ... „ 737
  Hainla, Ham. ... ... „ 735
  Helix, *Linn.* ... ... „ 739
  Helix, Linn. ... ... i. 663
  heterophylla, Wall. ... ... ii. 731
  hypoglauca, Hance ... ... i. 663
  Jackiana, G. Don ... ... ii. 734
  japonica, Jungh. ... ... „ 733
  Leschenaulti, W. & A. ... „ 724
  mollis, Wall. ... ... „ 731
  obovata, Wight ... ... „ 730
  ? *ovata*, Wall. ... ... „ 734
  palmata, Wall. ... ... „ 732
  parasitica, D. Don ... ... „ 724

Hedera Vol. Page
  parviflora, Champ. ... ... ii. 733
  polyacantha, Wall. ... ... „ 735
  racemosa, Wight ... ... „ 729
  rostrata, Wight ... ... „ 729
  subcordata, Wall. ... ... „ 724
  terebinthacea, Vahl ... ... „ 730
  terebinthacea, Wall. ... ... „ 729
  tomentosa, Ham. ... ... „ 728
  trifoliata, W. & A. ... ... „ 724
  undulata, Wall. ... ... „ 738
  Vahlii, Thw. ... ... „ 730
  venosa, Wall. ... ... „ 729
  Wallichiana, Dalz. & Gibs. „ 730
HEDEREÆ ... ... ii. 721
Hederopsis, *Clarke* ... ... ii. 739
  Maingayi, *Clarke* ... ... „ 739
Hedraiostylus corniculatus, Hassk. ... ... v. 464
Hedycarpus cauliflora, Hassk. v. 368
  lanceolatus, Miq. ... ... „ 368
  malayanus, Jack ... ... „ 374
Hedychium, *Kœn.* ... ... vi. 225
  acuminatum, Rosc. ... ... „ 227
  album, Ham. ... ... „ 225
  angustifolium, Roxb. vi. 231, 232
  angustifolium, Wall. ... vi. 231
  aurantiacum, *Wall.* ... ... „ 232
  aureum, *Clarke* ... ... „ 229
  barbatum, Wall. ... ... „ 231
  bicornutum, Wall. ... ... „ 227
  carneum, Rosc.... ... ... „ 232
  cernuum, Wight ... ... „ 226
  chrysoleucum, Hook. ... „ 226
  coccineum, *Ham.* ... ... „ 231
  coccineum, Lindl. ... ... „ 231
  coccineum, Wall. ... vi. 231, 232
  coronarium, *Kœn.* ... ... vi. 225
  crassifolium, *Baker* ... „ 228
  densiflorum, *Wall.* ... ... „ 227
  elatum, *Br.* ... ... „ 232
  elatum, Clarke ... ... „ 231
  ellipticum, *Ham.* ... .. „ 228
  Elwesii, *Baker* ... ... „ 226
  fastigiatum, Wall. ... ... „ 228
  flavescens, Carey ... ... „ 226
  flavescens, Lindl. ... ... „ 227
  flavescens, Lodd. ... ... „ 227
  flavum, Wall. ... ... „ 226
  flavum, Roxb. ... ... „ 226
  Gandasulium, Ham.... ... „ 225
  Gardnerianum, *Rosc.* ... „ 230
  Gardnerianum, Wall. vi. 231, 232
  glaucum, Rosc. ... ... vi. 229
  Gomezianum, *Wall.* ... „ 228
  gracile, *Roxb.* ... ... „ 229
  gracile, Wall. ... ... „ 229
  gratum, *Wall.* ... ... „ 232

Hedychium Vol. Page
Griffithianum, *Wall.* ... vi. 229
heteromallum, Lindl. ... ,, 230
Hookeri, *Clarke* ... ... ,, 230
longicornutum, *Griff.* ... ,, 228
longifolium, Rosc. ... ... ,, 231
luteum, *Herb. Calcutta* ... ,, 232
marginatum, *Clarke*... ... ,, 226
maximum, Rosc. ... ... ,, 226
pallidum, Regel ... ... ,, 230
Prophetæ, Ham. ... ... ,, 225
Roscoei, Wall. ... ... ,, 231
Roxburghii, Sieb. ... ... ,, 227
scaposum, Nimmo ... ... ,, 224
Sieboldii, Wall. ... ... ,, 227
speciosum, *Wall.* ... ... ,, 231
spicatum, *Ham.* ... ... ,, 227
spicatum, Lodd. ... ... ,, 225
squarrosum, Ham. ... ... ,, 231
stenopetalum, *Lodd.* ... ,, 231
sulphureum, Wall. ... ... ,, 226
thyrsiforme, *Ham.* ... ... ,, 230
Tocucho, Ham. ... ... ,, 230
trilobum, Wall.... ... ... ,, 227
urophyllum, Lodd. ... ... ,, 226
venustum, *Wight* ... ... ,, 226
villosum, *Wall.* ... ... ,, 228
sp., Griff. ... ... vi. 225, 228
HEDYOTIDEÆ ... ... iii. 18, 42
Hedyotis, *Linn.* ... ... iii. 49
acutangula, Champ. ... ,, 53
affinis, R. & S. ... ... ,, 67
affinis, W. & A.... ... ... ,, 72
alata, Koen. ... ... ,, 70
albo-nervia, *Bedd.* ... ... ,, 55
alsinæfolia, Br.... ... ... ,, 64
andamanica, *Kurz* ... ... ,, 64
angustifolia, Cham. & Schl. ,, 60
angustifolia, Wall. ... ... ,, 67
approximata, Br. ... ... ,, 60
argentea, Wall.... ... ... ,, 61
arguta, Br.... ... ... ,, 67
articularis, *Br.*... ... ... ,, 51
aspera, Bedd. ... ... ,, 68
aspera, Heyne ... ... ,, 68
attenuata, Willd. ... ... ,, 67
Auricularia, *Linn.* ... ... ,, 58
axillaris, Gardn. ... ... ,, 54
Beddomei, *Hk. f.* ... ... ,, 52
biflora, Linn. ... ... ,, 70
biflora, Roth ... ... ,, 64
biflora, Wall. ... ... ,, 70
borreroides, Champ.... ... ,, 56
brachiata, Miq.... ... ... ,, 60
brachiata, W. & A. ... ... ,, 66
Burmanniana, Br. ... ... ,, 64
buxifolia, *Bedd.* ... ... ,, 52
calycina, Wall.... ... ... ,, 73

Hedyotis Vol. Page
capillipes, Schlecht. ... iii. 73
capitata, Bedd. ... ... ,, 52
capitellata, *Wall.* ... ... ,, 56
capituliflora, Miq. ... ... ,, 58
carnosa, Dalz. & Gibs. ... ,, 74
cephalophora, Br. ... ... ,, 56
cinereo-viridis, *Thw.* ... ,, 55
cœrulea, *W. & A.* ... ... ,, 60
cœrulea, Korth. ... ... ,, 58
congesta, *Br.* .. .. ,, 61
connata, *Wall.*... ... ... ,, 62
corymbosa, Wall. ... ... ,, 51
costata, Br. ... ... ,, 59
costata, Kurz ... ... ,, 58
cyanantha, Kurz ... ... ,, 60
cyanescens, *Thw.* ... ... ,, 62
cymosa, *Thw.* ... ... ,, 50
cymosa, Br. ... ... ,, ... ,, 72
deltoidea, W. & A. ... ... ,, 72
depressa, R. & S. ... ... ,, 71
dichotoma, Koen. ... ... ,, 67
dichotoma, Wall. ... ... ,, 67
diffusa, Willd. ... ... ,, 65
elegans, *Wall.* ... ... ,, 53
? *elongata*, Br. ... ... ,, 68
evenia, *Thw.* ... ... ,, 50
extensa, Br. ... ... ,, 65
Finlaysoniana, Wall. ... iii. 57,75
flavescens, Thw. ... ... iii. 52
fœtida, Dalz. & Gibs. . ,, 74
fruticosa, *Linn.* ... ... ,, 42
fruticosa, Retz. ... ... ,, 201
fulva, *Hk. f.* ... ... ,, 58
fusca, Ham. ... ... ,, 68
galioides, Wall.... ... ... ,, 53
Gardneri, *Thw.* ... ... ,, 53
glabella, Br. ... ... ,, 61
glabra, *Br.* ... ... ,, 59
gracilis, Wall. ... ... ,, 68
graminicola, Kurz ... ... ,, 64
graminifolia, Linn. f. ... ,, 69
Griffithii, *Hk. f.* ... ... ,, 58
Helferi, *Hk. f.* ... ... ,, 53
Heynii, Bedd. ... ... ,, 67
Heynii, W. & A. ... ... ,, 65
hirsutissima, *Bedd.* ... ... ,, 55
hispida, *Retz.* ... ... ,, 60
hispida, Roth ... ... ,, 71
inamœna, *Thw.* ... ... ,, 61
inamœna, Thw. ... ... ,, 55
ingrata, Wall. ... ... ,, 71
intermedia, W. & A. ... ,, 64
lancifolia, Dalz. & Gibs. ,, 73
latifolia, Dalz. ... ... ,, 73
Lawsoniæ, *W. & A.* ... ... ,, 56
lentiginosa, Bedd. ... ... ,, 51
? *Leschenaultiana*, DC. ... ,, 51

Hedyotis Vol. Page
Leschenaultiana, W. & A. iii. 72
Lessertiana, *Arn.* ... ,, 52
linarifolia, Wall. ... ,, 66
Lindleyana, Hook. ... ,, 63
lineata, *Roxb.* ... ,, 59
lineata, Wall. ... ,, 58
linoides, Griff. ... ,, 67
Macræi, *Hk. f.* ... ,, 50
macrophylla, *Wall.* ... ,, 54
macrophylla, Thw. ... ,, 54
Maingayi, *Hk. f.* ... ,, 49
marginata, Thw. ... ,, 53
maritima, Linn. f. ... iv. 287
maritima, Wall. ... iii. 69
membranacea, *Thw.* ... ,, 54
merguensis, Hk. f. ... ,, 62
minima, Heyne ... iii. 69, 70
mollis, *Wall.* ... iii. 57
monocephala, *Br.* ... ,, 63
monosperma, Wight ... ,, 75
multicaulis, Schldl. ... ,, 59
mysurensis, Wall. ... ,, 75
Neesiana, Arn. ... ,, 61
nervosa, Wall. ... ,, 58
nitida, *W. & A.* ... ,, 61
nodiflora, Wall. ... ,, 54
nodulosa, *Arn.* ... ,, 54
nudicaulis, W. & A. ... ,, 70
nummularia, Arn. ... ,, 75
nummulariformis, Arn. ... ,, 75
obscura, *Thw.* ... ,, 51
orbiculata, Heyne ... ,, 66
ovata, Thw. ... ,, 52
ovatifolia, Cav. ... ,, 70
oxyphylla, Wall. ... ,, 72
paniculata, Dcne. ... ,, 69
paradoxa, *Kurz* ... ,, 59
pinifolia, *Wall.* ... ,, 60
plantaginifolia, Arn. ... ,, 56
polycarpa, Br. ... ,, 57
polygonoides, Wall. ... ,, 65
procumbens, Wall. ... ,, 58
prostrata, *Korth.* ... ,, 61
pruinosa, *W. & A.* ... ,, 51
pterita, Bl. ... ,, 70
puberula, Wall. ... ,, 66
pumila, Linn. f. ... ,, 65
purpurascens, *Bedd.* ... ,, 50
pygmæa, Wall. ... ,, 60
quadrilocularis, Thw. ... ,, 74
quinquenervia, *Thw.* ... ,, 52
racemosa, Lam. ... ,, 70
racemosa, Wall. ... ,, 73
racemosa, W. & A. ... ,, 69
ramosa, Bl. ... ,, 64
ramosissima, Kurz ... ,, 65
repens, Lam. ... ,, 42

Hedyotis Vol. Page
Rheedii, W. & A. ... iii. 73
Richardiana, Arn. ... ,, 75
rigida, Miq. ... ,, 60
rotundifolia, DC. ... ,, 66
rotundifolia, Ham. ... ,, 70
rugulosa, Korth ... ,, 48
scaberula, *Hk. f.* ... ,, 50
scabra, *Wall.* ... ,, 62
scandens, *Roxb.* ... ,, 57
scapigera, Br. ... ,, 70
serpyllifolia, Poir ... ,, 66
spergulacea, Kurz ... ,, 70
stipulata, *Br.* ... ,, 63
stipulata, Br. ... ,, 71
Stocksii, Hk. f. & T. ... ,, 67
stricta, Wall. ... ,, 68
stylosa, *Br.* ... ,, 51
subcarnosa, Wall. ... ,, 62
subtilis, Miq. ... ,, 74
swertioides, *Hk. f.* ... ,, 51
tenella, Miq. ... ,, 74
tenelliflora, *Bl.* ... ,, 60
tenuiflora, Schlecht. ... ,, 74
Thomsoni, *Hk. f.* ... ,, 63
Thwaitesii, *Hk. f.* ... ,, 54
travancorica, *Bedd.* ... ,, 55
trinervia, W. & A. ... ,, 66
tubularis, Br. ... ,, 74
tubularis, Wall. ... ,, 73
ulmifolia, Wall. ... ,, 59
umbellata, Lamk. ... ,, 66
uncinella, *Hk. & Arn.* ... iii. 56, 58
urophylla, Wall. ... iii. 72
venosa, Korth. ... ,, 59
verticillaris, *W. & A.* ... ,, 56
vestita, *Br.* ... ,, 58
villosa, W. & A. ... ,, 58
viscida, *Bedd.* ... ,, 57
volubilis, Wall. ... ,, 57
Walkerii, Arn. ... ,, 55
Wallichii, *Kurz* ... ,, 53
Wightiana, Wall. ... ,, 75
HEDYSAREÆ ... ii. 58
Hedysarum, *Linn.* ... ii. 145
adhærens, Poir. ... ,, 164
alatum, Roxb. ... ,, 163
Alhagi, Linn. ... ,, 145
alopecuroides, Roxb. ... ,, 156
arboreum, D. Don ... ,, 156
arboreum, Roxb. ... ,, 161
articulatum, Roxb. ... ,, 169
astragaloides, *Benth.* ... ,, 146
biarticulatum, Linn. ... ,, 163
bijugum, Klein ... ,, 141
bracteatum, Hb. Madr. ... ,, 159
bracteatum, Roxb. ... ,, 227
bupleurifolium, Linn. ... ,, 158

Hedysarum Vol. Page
cachemirianum, *Benth.* ... ii. 146
cajanifolium, H. B. K. ... ,, 161
capitatum, Burm. ... ... ,, 171
caudatum, Thunb. ... ... ,, 163
Cephalotes, Roxb. ... ... ,, 162
collinum, Roxb. ... ... ,, 168
conicum, Poir. ... ... ,, 171
conjugatum, Willd. ... ... ,, 148
crinitum, Linn. ... ... ,, 155
cylindricum, Poir. ... ... ,, 158
dichotomum, Willd. ... ... ,, 169
diffusum, Roxb. ... .. ,, 164
diffusum, Willd. ... ... ,, 169
diphyllum, Linn. ... ... ,, 147
erinaceum, Poir. .. ... ,, 92
Falconeri, *Baker* ... ... ,, 146
floribundum, D. Don ... ,, 167
gangeticum, Linn. ... ... ,, 168
Gibsoni, Grah. ... ... ,, 140
glumaceum, Koen. ... ... ,, 159
gramineum, Retz. . ... ,, 158
gyrans, Linn. ... ... ,, 174
gyroides, Roxb. ... ... ,, 175
hamatum, Burm. ... ... ,, 148
hamatum, Heyne ... ... ,, 157
hamosum, Roxb. ... ... ,, 156
heterocarpum, Linn. ... ,, 171
heterophyllum, Willd. ... ,, 173
junceum, Linn. f. ... ... ,, 142
kumaonense, *Benth.* ... ,, 145
laburnifolium, Poir. ... ... ,, 163
lagenarium, Roxb. ... ... ,, 152
lagopoides, Burm. ... ... ,, 156
latebrosum, Linn. ... ... ,, 65
latifolium, Roxb. ... ... ,, 169
laxiflorum, *Benth.* ... ... ,, 146
laxum, Spreng. ... ... ,, 165
lineatum, Linn. ... ... ,, 228
longifolium, Rottl. ... ... ,, 159
maculatum, Linn. ... ... ,, 168
microcalyx, *Baker* ... ... ,, 147
moniliferum, Linn. ... ... ,, 157
mucronatum, Bl. ... ... ,, 161
Neli-Tali, Roxb. ... ... ,, 151
nummularifolium, DC. ... ,, 140
nummularifolium, Linn. ii. 92, 158
obcordatum, Poir. ... ... ii. 154
orbiculatum, Rottl. ... ... ,, 174
ormocarpoides, Desv. ... ,, 164
patens, Roxb. ... ... ,, 171
pictum, Jacq. ... ... ,, 155
polycarpum, Lam. ... ... ,, 171
prostratum, Linn. ... ... ,, 94
pulchellum, Linn. ... ... ,, 162
punctatum, Rottl. ... ... ,, 226
purpureum, Roxb. ... ... ,, 171
quinquangulatum, Roxb.... ,, 169

Hedysarum Vol. Page
recurvatum, Roxb. ... ... ii. 164
reniforme, Linn. ... ... ,, 173
reniforme, Lour. ... ... ,, 154
reptans, Roxb. ... ... ,, 173
retroflexum, Linn. ... ... ,, 170
retusum, D. Don ... ... ,, 171
Rottleri, Spreng. ... ... ,, 164
rotundifolium, Vahl. ... ,, 92
Roxburghii, Spreng. ... ... ,, 164
rugosum, Willd.... ... ... ,, 159
sambuense, D. Don ... ... ,, 167
sennoides, Willd. ... ... ,, 152
sericeum, Thunb. ... ... ,, 142
sikkimense, *Benth.* ... ... ,, 145
siliquosum, Burm. ... ... ,, 171
sororium, Linn. ... ... ,, 153
sparteum, Burm. ... ... ,, 140
spirale, Schwartz ... ... ,, 164
stipulaceum, Burm. ... ... ,, 173
strobiliferum, *Baker* ... ,, 146
strobiliferum, Linn. ... ... ,, 227
styracifolium, Linn. ... ... ,, 170
styracifolium, Roxb. ... ... ,, 159
tenellum, D. Don ... ... ,, 174
tiliæfolium, D. Don ... ,, 168
tomentosum, Thunb. ... ,, 143
triflorum, Linn. ... ... ,, 173
triquetrum, Linn. ... ... ,, 163
tuberosum, Roxb. ... ... ,, 197
umbellatum, Linn. ... ... ,, 161
umbellatum, Roxb. ... ... ,, 162
vaginale, Linn. ... ... ,, 158
varium, Roth ... ... ,, 158
Vespertilionis, Linn. ... ,, 154
viscidum, Linn. ... ... ,, 154
Wallichianum, Spreng. ... ,, 167
Hegetschweilera pulchella, Regel ... ... ii. 158
Hekaterosachne elatior, Steud. vii. 67
Hekorima candida, Kunth vi. 322
Heleocharis, Lestib. ... ... vi. 627
Heleochloa, *Host.* ... ... vii. 235
alopecuroides, Duthie ... ,, 236
dura, *Boiss.* ... ... ,, 236
schœnoides, *Host* ... ... ,, 235
HELIANTHOIDEÆ ... ... iii. 222, 302
Helianthus oleifera, Wall. ... iii. 308
Helichrysum, *Gaertn.* ... ... iii. 290
buddleioides, *DC.* 290, 291
? *elegans*, D. Don ... ... ,, 280
Hookerianum, DC. ... ... ,, 291
leptophyllum, DC. ... ... ,, 285
nepalense, Spreng. ... ... ,, 280
Notonianum, DC. ... ... ,, 284
stoloniferum, D. Don ... ,, 280
Wightii, *Clarke* ... ... ,, 291
Helicia, *Lour.* ... ... v. 189

Helicia ... Vol. Page
attenuata, *Bl.* ... v. 190
castaneæfolia, Meissn. ... „ 191
ceylanica, *Gardn.* ... „ 190
cochinchinensis, Kurz ... „ 189
erratica, *Hk. f.* ... „ 189
excelsa, *Bl.* ... „ 191
javanica, Bl. ... „ 191
loranthoides, Presl ... „ 191
macrophylla, Wall. ... „ 191
nilagirica, *Bedd.* ... „ 190
petiolaris, *Benn.* ... „ 190
pyrrhobotrya, *Kurz* ... „ 191
robusta, *Wall.* ... „ 191
robusta, Bedd. ... „ 191
robusta, Hk. f. & T. ... „ 189
salicifolia, Presl ... „ 191
terminalis, *Kurz* ... „ 190
travancorica, *Bedd.* ... „ 191
HELICTEREÆ ... i. 353
Helicteres *Linn.* ... i. 365
angustifolia, *Linn.* ... „ 365
carthagenensis, Wall. ... „ 366
chrysocalyx, Miq. ... „ 365
elongata, *Wall.* ... „ 365
glabriuscula, *Wall.* ... „ 366
grewiæfolia, Wall. ... „ 366
hirsuta?, Hb. Ham. ... „ 366
Isora, *Linn.* ... „ 365
lanceolata, DC. ... „ 365
lanigera, Wall. ... „ 366
longifolia, Wall. ... „ 366
oblonga, Wall. ... „ 366
obtusa, *Wall.* ... „ 366
plebeja, *Kurz* ... „ 366
Roxburghii, G. Don ... „ 365
spicata, *Colebr.* ... „ 366
? *spinulosa*, Wall. ... „ 366
vestita, Wall. ... „ 366
virgata, Wall. ... „ 365
Helie atalantioides, Roem. ... i. 508
Heligme javanica, A. DC. ... iii. 650
Rheedei, Wight ... „ 650
spiralis, Thw. ... „ 650
Helinus, *E. Mey.* ... i. 644
lanceolatus, *Brandis* ... „ 644
Heliophytum indicum, DC. ... iv. 152
velutinum, DC. ... „ 152
Heliopsis platyglossa, Cass. iii. 308
Heliospora flavescens, Jack iii. 127
HELIOTROPIEÆ ... iv. 134
Heliotropium, *Linn.* ... iv. 148
affghanum, Boiss. ... „ 150
anisophyllum, Beauv. ... „ 152
bracteatum, *DC.* ... „ 151
brachuicum, Stocks ... „ 148
brevifolium, Wall. ... „ 151
Brocchianum, Vis. ... „ 150

Heliotropium ... Vol. Page
calcareum, *Stocks* ... iv. 150
cinerascens, Aitch. ... „ 150
compactum, D. Don ... „ 151
coromandelianum, Retz. ... „ 150
crispum, Desf. ... „ 150
cyrtostachyum, Miq. ... „ 152
dasycarpum, *Ledeb.* ... „ 148
Eichwaldi, *Steud.* ... „ 149
ellipticum, Ledeb. ... „ 149
eriocarpum, Delile ... „ 150
europæum, Aitch. ... „ 150
europæum, Linn. ... „ 150
foliatum, Br. ... „ 152
glabellum, Br. ... „ 151
glabellum, Heyne ... „ 151
gracile, Br. ... „ 150
indicum, *Linn.* ... „ 152
Kunzei, Lehm. ... „ 150
lasiocarpum, Fisch. & Mey. „ 150
laxiflorum, DC. ... „ 152
linifolium, Lehm. ... „ 151
luteum, Aitch. ... „ 148
luteum, Poir ... „ 148
macrocarpum, Guss. ... „ 149
malabaricum, Retz. ... „ 149
marifolium, *Retz.* ... „ 152
marifolium, Wall. ... „ 152
niloticum, A. DC. ... „ 150
nubicum, Bunge ... „ 151
obovatum, D. Don ... „ 150
ophioglossum, *Stocks* ... „ 149
ovalifolium, *Forsk.* ... „ 150
paniculatum, *Br.* ... „ 151
paniculatum, Heyne ... „ 148
paniculatum, Roxb. ... „ 153
persicum, Lamk. ... „ 150
polystachyum, Poir. ... „ 150
ramosissimum, Sieb. ... „ 150
ramosum, Roxb. ... „ 152
rariflorum, *Stocks* ... „ 152
Rottleri, *Lehm.* ... „ 151
Roxburghii, *Spreng.* ... „ 153
scabrum, *Retz.* ... „ 152
Schrenkianum, Ledeb. ... „ 148
strictum, Ledeb. ... „ 149
strigosum, *Willd.* ... „ 151
stylosum, Franch. ... „ 149
supinum, *Linn.* ... „ 149
Syenites, Spreng. ... „ 150
tenue, Wall. ... „ 151
tomentosum, Poir. ... „ 150
undulatum, *Vahl* ... „ 150
viridiflorum, Lehm. ... „ 146
zeylanicum, *Lamk.* ... „ 148
zeylanicum, Heyne ... „ 151
zeylanicum, Lamk. ... „ 153
zeylanicum, Wall. ... „ 152

Vol. Page
Helittophyllum javanicum, Bl. v. 191
HELLEBOREÆ i. 1
Hellenia alba, Willd. vi. 253
Allughas, Willd. „ 254
aquatica, Horan. „ 256
grandiflora, Retz. „ 250
scabra, Bl. „ 256
Helmia bulbifera, Kunth vi. 295
? *dæmona*, Kunth „ 289
? *tomentosa*, Kunth „ 289
Helminthospermum glabrescens, Thw. v. 486
scabridum, Thw. „ 485
Helopus acrotrichus, Steud. vii. 20
annulatus, Nees „ 20
lævis, Trin. „ 20
pilosus, Trin. „ 20
trichopus, Hochst. „ 35
Helosciadium ? Heyneanum, DC. ii. 684
? *pubescens*, DC. „ 688
? *tenerum*, DC. „ 686
? *trifoliatum*, DC. „ 688
Wallichianum, Miq. „ 688
HELOSIDEÆ v. 237
Helwingia, *Willd.* ii. 726
himalaica, *Hk. f. & T.* „ 726
populifolia, Spreng. „ 727
rusciflora, Willd. „ 726
Helygia javanica, Bl. iii. 650
Hemarthria, Br. vii. 152
capensis, Trin. „ 153
caudiculata, Steud. „ 153
compressa, Kunth „ 153
coromandelina, Steud. „ 153
fasciculata, Kunth „ 153
Hamiltoniana, Steud. „ 154
laxa, Steud. „ 153
? *perforata*, Kunth „ 158
protensa, Steud. „ 153
? *vaginata*, Bühse „ 153
sp., Wall. „ 153
HEMEROCALLEÆ vi. 300
Hemerocallis, *Linn.* vi. 326
disticha, Donn „ 326
fulva, *Linn.* „ 326
longituba, Miq. „ 327
Hemiadelphis polysperma, Nees iv. 406
Hemiandrina borneensis, Hk. f. ii. 47
Hemicarex, Benth. vi. 694, 698
curvata, Clarke vi. 699
filicina, Clarke „ 696
Hookeri, Clarke „ 695
laxa, Benth. „ 698
pygmæa, Clarke „ 696
trinervis, Clarke vi. 696, 712

Hemicarex Vol. Page
sp., Benth. vi. 712
Hemicarpha Isolepis, Nees vi. 663
Hemichoriste montana, Nees iv. 525
Hemicyclia, *W. & A.* v. 337
andamanica, *Kurz* „ 338
elata, *Bedd.* „ 339
Gardneri, *Thw.* „ 338
lanceolata, *Thw.* „ 338
sepiaria, *W. & A.* „ 337
sumatrana, *Muell.* „ 338
venusta, *Thw.* „ 339
Wightii, *Hk. f.* „ 339
Hemidesmus, *Br.* iv. 4
indicus, *Br.* „ 5
pubescens, W. & A. „ 5
Wallichii, Miq. „ 5
Wallichii, W. & A. „ 8
Hemigraphis, *Nees* iv. 422
confinis, *T. Anders.* „ 423
dura, *T. Anders.* „ 422
ebracteolata, *Clarke* „ 424
elegans, *Nees* „ 424
elegans, T. Anders. „ 423
flaccida, *Clarke* „ 424
flava, *Kurz* „ 426
glandulosa, T. Anders. „ 467
glaucescens, *Clarke* „ 425
Griffithiana, *T. Anders.* „ 425
hirta, *T. Anders.* „ 422
latebrosa, *Nees* „ 423
Pavala, Kurz „ 423
quadrifaria, *T. Anders.* „ 425
rupestris, T. Anders. „ 424
venosa, *Clarke* „ 423
Hemigymnia Macleodii, Griff. iv. 130
Hemigyrosa, *Bl.* i. 670
canescens, *Thw.* i. 671, 679, 685
deficiens, *Bedd.* i. 671, 685
longifolia, *Hiern* i. 671
trichocarpa, Thw. „ 671
Hemiorchis, *Kurz* vi. 206
burmanica, *Kurz* „ 207
Hemiphractum oxyandrum, Turcz. i. 313
Hemiphragma, *Wall.* iv. 289
heterophyllum, *Wall.* „ 289
Hemipilia, *Lindl.* vi. 167
calophylla, *Par. & Rchb. f.* „ 167
cordifolia, *Lindl.* „ 167
Hemisacris gonatodes, Steud. vii. 336
Hemisteptia lyrata, Bunge iii. 373
Henckelia bifolia, Dietr. iv. 357
cinerea, Spreng. „ 346
crinita, Spreng. „ 351
frutescens, Spreng. „ 355
grandiflora, Dietr. „ 285
grandifolia, Dietr. „ 358

Henckelia Vol. Page
incana, Spreng. ... .. iv. 353
macrophylla, Spreng. iv. 346, 358
oblonga, Spreng. ... iv. 347
oppositifolia, Dietr. ... ... „ 286
plicata, Spreng. ... ... „ 346
primulifolia, Spreng. ... „ 347
pumila, Dietr. ... ... „ 357
reptans, Spreng. ... ... „ 352
Roxburghiana, Dietr. ... „ 285
urticæfolia, Dietr. ... ... „ 358
villosa, Spreng. ... ... „ 347
Wallichiana, Dietr. ... „ 358
Henosis, *Hk. f.* v. 771; vi. 177, 189
longipes, *Hk. f.* v. 771; vi. 189
Henslovia, *Bl.* ... ... v. 232
buxifolia, *Bl.* ... ... „ 234
erythrocarpa, *Kurz* ... ... „ 234
frutescens, Benth. ... ... „ 233
granulata, *Hk. f. & T.* ... „ 232
heterantha, *Hk. f. & T.* ... „ 233
heterantha, Hk. f. & T. ... „ 227
heterantha, Vidal ... ... „ 232
Lobbiana, *A. DC.* ... ... „ 233
? *philippinensis*, A. DC. ... „ 233
spicata, Bl. ... ... „ 234
umbellata, Bl. ... ... v. 222, 233
varians, *Bl.* ... ... v. 233
Henslowia affinis, Planch. ... ii. 571
Hookeri, Wall. ... ... „ 574
pubescens, Griff. ... ... „ 574
glabra, Wall. ... ... „ 574
leptostachys, Planch. ... „ 574
paniculata, Miq. ... ... „ 574
pubescens, Wall. ... ... „ 574
sp., Griff. ... ... „ 574
Hepatica sp. Falc. ... ... i. 8
Heptapleurum, *Gaertn.* ... ii. 727
biternatum, *Clarke* ... ... „ 731
capitatum, Seem. ... ii. 731, 732
Cephalotes, *Clarke* ... ... ii. 731
elatum, *Clarke* ... ... „ 728
ellipticum, Seem. ... ... „ 729
emarginatum, *Seem.* ... „ 729
exaltatum, Seem. ... ... „ 730
glaucum, *Clarke* ... ... „ 728
glaucum, Kurz ... ... „ 728
heterophyllum, *Seem.* ... „ 731
hypoleucum, *Kurz* ... ... „ 728
impressum, *Clarke* ... ... „ 728
khasianum, *Clarke* ... ... „ 730
macrophyllum, Wall. ... „ 730
racemosum, *Bedd.* ... ... „ 729
rostratum, *Bedd.* ... ... „ 729
stellatum, *Gaertn.* ... ... „ 730
subulatum, *Seem.* ... ... „ 730
venulosum, *Seem.* ... ... „ 729
Wallichianum, *Clarke* ... „ 730
Heptapleurum Vol. Page
Wallichianum, Seem. ... ii. 730
Heracleum, *Linn.* ... ... ii. 711
absinthifolium, Vent. ... „ 717
aquilegifolium, *Clarke* ... „ 715
Brunonis, *Benth.* ... ... „ 713
burmanicum, *Kurz* ... ... „ 714
cachemiricum, *Clarke* ... „ 712
candicans, *Wall.* ... ... „ 714
canescens, *Lindl.* ... ... „ 713
ceylanicum, *Gardn.* ... „ 716
? *cinereum*, Lindl. ... ... „ 713
concanense, *Dalz.* ... ... „ 716
diversifolium, Wall. ... ... „ 712
grandiflorum, Dalz. & Gibs. „ 716
hirsutum, Edgew. ... ... „ 713
Hookerianum, *W. & A.* ... „ 715
Jacquemontii, *Clarke* ... „ 712
nepalense, D. Don ... ... „ 714
nubigenum, *Clarke* ... ... „ 713
obtusifolium, *Wall.* ... ... „ 714
pedatum, *Wight* ... ... „ 716
Pinda, *Dalz. & Gibs.* ... „ 717
pinnatum, *Clarke* ... ... „ 712
rigens, *Wall.* ... ... „ 715
Sprengelianum, *W. & A.* „ 716
Sprengelianum, Dalz. & Gibs. „ 715
Sprengelianum, Thw. ... „ 716
sublineare, *Clarke* ... ... „ 713
Thomsonii, *Clarke* ... ... „ 711
tomentosum, Dalz. & Gibs. „ 689
tomentosum, Sm. ... ... „ 717
tragoides, Benth. ... ... „ 712
Wallichii, *DC.* ... ... „ 712
sp., Hk. f. & T. ii. 712, 715, 716
Heritiera, *Ait.* ... ... i. 362
attenuata, Wall. ... i. 363, 517
Fomes, *Buch.* ... ... i. 363
Fomes, Wall. ... ... „ 363
littoralis, *Dryand.* ... ... „ 363
macrophylla, Wall. ... ... „ 363
minor, Roxb. ... ... „ 363
Papilio, *Bedd.* ... ... „ 363
Heritiera, Retz. ... ... vi.
alba, Retz. ... ... „ 253
Allughas, Retz. ... ... „ 254
aquatica, Retz. ... ... „ 256
Hermannia alnifolia, Wall. i. 322
HERMANNIEÆ ... ... i. 354
Herminium, *Linn.* ... vi. 128, 180
angustifolium, *Benth.* ... vi. 129
congestum, *Lindl.* ... ... „ 130
constrictum, Lindl. ... ... „ 161
Duthiei, *Hk. f.* ... ... „ 130
fallax, *Lindl.* ... ... „ 129
goodyeroides, Lindl. ... „ 161
gramineum, *Lindl.* ... ... „ 131
grandiflorum, Lindl. ... „ 129

Herminium Vol. Page
Hamiltonianum, Lindl. ... vi. 160
Josephi, *Rchb. f.* ... ... „ 129
longicruris, Wright, *vide Aceras* ... ... „ 129
Monorchis, *Br.* ... ... „ 128
orbiculare, *Hk. f.* ... ... „ 130
pugioniforme, *Lindl.* ... „ 130
reniforme, Lindl. ... ... „ 152
unalaschcense, Rchb. f. ... „ 130
sp., Griff. ... ... „ 165
Hernandia, *Linn.* ... ... v. 188
peltata, *Meissn.* ... ... „ 188
Sonora, Linn. ... ... „ 188
HERNANDIEÆ ... ... v. 117
Herniaria, *Linn.* ... ... iv. 712
Besseri, Fisch. ... ... „ 712
cinerea, DC. ... ... „ 712
hirsuta, *Linn.* ... ... „ 712
incana, Lamk. ... ... „ 712
macrocarpa, Sibth. ... ... „ 712
Herpestis, *Gaertn. f.* ... ... iv. 272
amara, Benth. ... ... „ 275
amara, Spanoghe ... ... „ 273
connata, Spreng. ... ... „ 269
floribunda, *Br.* ... ... „ 273
Hamiltoniana, *Benth.* ... „ 272
javanica, Bl. ... ... „ 263
lanceolata, Wight ... ... „ 273
lanuginosa, Bl. ... ... „ 263
linearis, Spreng. ... ... „ 273
Monnieria, *H. B. K.* ... „ 272
ovata, Benth. ... ... „ 263
polygonoides, Benth... ... „ 276
pulcherrima, Griff. ... ... „ 267
pygmæa, Griff. ... ... iv. 267, 268
rugosa, Roth ... ... „ 266
spathulata, Bl. ... ... „ 272
sp., Griff. ... ... „ 267
Herpetospermum, *Wall.* ... ii. 613
caudigerum, *Wall.* ... ... „ 613
Herpysma, *Lindl.* ... vi. 98, 179
longicaulis, *Lindl.* ... ... vi. 98
Hersilia ramosa, Klotz. ... iii. 251
simplex, Klotz. ... ... „ 251
Hesperethusa acidissima, Roem. ... ... i. 507
ambigua, Roem. ... ... „ 507
crenulata, Roem. ... ... „ 507
Hesperis acris, Forsk. ... ... i. 157
Hetæria, *Bl.* ... ... vi. 114, 179
(*vide* Ætheria and Etæria) ... ... vi. 116
anomala, *Lindl.* ... ... „ 116
elata, *Hk. f.* ... ... „ 116
elongata, *Lindl.* ... vi. 116, 197
Gardneri, *Benth.* ... ... vi. 115
Helferi, *Hk. f.* ... ... „ 115

Hetæria Vol. Page
longifolia, Benth. ... ... vi. 109
ovalifolia, *Benth.* ... ... „ 115
rubens, *Benth.* ... ... „ 115
Heterocanscora Schultesii, Clarke ... ... iv. 105
Heterocarpus glaber, Wight vi. 371
hirsutus, Wight ... ... „ 371
? *obliquus*, Hassk. ... ... „ 372
Heterocaryum minimum, A. DC. ... ... iv. 163
pachypodum, A. DC. ... „ 163
rigidum, A. DC. ... ... „ 163
Szovitzianum, A. DC. ... „ 163
Heterochæta, asteroides, DC. iii. 250
diplostephioides, DC. ... „ 251
erigeroides, DC. ... ... „ 256
sp. Str. & Wint.. ... ... „ 250
Heterolepis elegans, Ehrt. ... vii. 291
Heteroloma, Benth. ... ... ii. 168
Heterolytron scabrum, Jungh. vii. 217
Heteropanax, *Seem.* ... ... ii. 734
fragrans, *Seem.* ... ... „ 734
HETEROPETALÆ ... ... i. 380
Heterophragma, *DC.* ... ... iv. 380
adenophyllum, *Seem.* ... „ 381
chenoloides, Dalz. & Gibs. „ 382
Roxburghii, *DC.* ... ... „ 381
suaveolens, Dalz. & Gibs „ 383
sulfureum, *Kurz* ... ... „ 381
Heteropogon, Hack. ... ... vii. 199
Heteropogon, Pers. ... ... vii.
acuminatus, Trin. ... ... „ 200
Allionii, R. & S. ... ... „ 199
concinnus, Thw. ... ... „ 196
contortus, Beauv. ... ... „ 199
firmus, Presl ... ... „ 199
glaber, Pers. ... ... „ 199
hirsutus, Beauv. ... ... „ 199
hirtus, Pers. ... ... „ 199
hispidissimus, Steud. ... „ 199
Hochstetteri, Anderss. ... „ 167
Hohenackeri, Hochst. ... „ 199
insignis, Thw. ... ... „ 200
melanocarpus, Benth. ... „ 200
messanensis, Guss. ... ... „ 199
polystachyon, Arn. ... vii. 201, 202
polystachyus, Nees ... ... vii. 199
polystictus, Hochst. ... „ 200
Roxburghii, Arn. ... ... „ 200
Roylei, Nees ... ... „ 200
scrobiculatus, Fourn. ... „ 200
Heteropyxis, Griff. ... ... i. 352
HETEROSCIADIÆ ... ... ii. 665
Heterosmilax, *Kunth* ... ... vi. 314
indica, *A. DC.* ... ... „ 314
Heterostalis diversifolia, Schott ... ... vi. 510

Heterostalis Vol. Page
foliolosa, Schott ... ... vi. 510
Huegeliana, Schott ... ... „ 510
Heterostemma, *W. & A.* ... iv. 47
alatum, *Wight* ... ... „ 47
Dalzellii, *Hk. f.* ... ... „ 48
stellatum, *Hk. f.* ... ... „ 47
tanjorense, *W. & A.* ... „ 47
tanjorense, Thw. ... ... „ 48
urceolatum, Dalz. ... ... „ 49
Wallichii, *Wight* ... ... „ 47
Wallichii, Dalz. & Gibs. ... „ 48
sp., Hk. f. & T. ... iv. 47, 48
Heuffelia australis, Fourn. ... vii. 276
præusta, Schur ... ... „ 276
pratensis, Schur ... ... „ 276
Hewittia, *W. & A.* ... ... iv. 216
bicolor, *Wight* ... ... „ 216
cæspitosa, Steud. ... ... „ 205
Hexacentris acuminata, Nees iv. 393
coccinea, Nees ... ... „ 393
dentata, Nees ... ... „ 393
mysorensis, Wight ... ... „ 393
Hexakistra, Hk. f. ... v. 240, 283
Hexapora Curtisii, ... v. 189, 862
Heylandia, *DC.* ... ... ii. 64
? *cordifolia*, Grah. ... ... „ 93
hebecarpa, DC. ... ... „ 65
latebrosa, *DC.* ... ... „ 65
leiocarpa, DC. ... . „ 65
Heynea, *Roxb.* ... ... i. 565
affinis, Juss. ... ... „ 565
connaroides, Wight ... ... „ 565
quinquejuga, Roxb. ... ... „ 565
sumatrana, Miq. ... ... „ 565
trifoliata, Juss. ... ... „ 564
trijuga, *Roxb.* ... ... „ 565
HIBISCEÆ ... ... i. 318
Hibiscus, *Medik.* ... ... i. 334
Abelmoschus, *Linn.* ... „ 342
acerifolius, DC. ... ... „ 338
aculeatus, Roxb. ... ... „ 335
æstuans, Rottl. ... ... „ 344
æstuans, Wall. ... ... „ 338
albus, Wall. ... ... „ 336
angulosus, *Mast.* ... ... „ 341
Arnotti, Griff. ... ... „ 344
asperatus, Wall. ... ... „ 338
bifurcatus, Roxb. ... ... „ 335
borbonicus, Wight ... ... „ 337
canaranus, Miq. ... ... „ 341
cancellatus, *Roxb.* ... ... „ 342
canescens, *Heyne* ... ... „ 337
cannabinus, *Linn.* ... ... „ 339
chinensis, Wall. ... ... „ 342
clandestinus, Cav. ... ... „ 335
collinus, *Roxb.* ... ... „ 338
coriaceus, Heyne ... ... „ 332

Hibiscus Vol. Page
crotonifolius, Wall. ... ... i. 332
cuspidatus, Edgew. ... ... „ 338
dissectus, Wall. ... „ 334
diversifolius, *Jacq.* ... ... „ 339
eriocarpus, DC. ... ... „ 338
esculentus, *Linn.* ... ... „ 343
ferrugineus, DC. ... ... „ 343
ficulneus, *Linn.* ... ... „ 340
ficulneus, Cav. ... ... „ 339
flavescens, Cav. ... ... „ 342
floccosus, *Mast.* ... ... „ 343
fragrans, *Roxb.* ... ... „ 337
furcatus, *Roxb.* ... ... „ 335
furcatus, Wall. ... ... „ 334
gangeticus, Roxb. ... ... „ 345
Gibsoni, *Stocks* ... ... „ 339
heptaphyllus, Dalz. & Gibs. „ 335
hirtus, *Linn.* ... ... „ 335
hirtus, Ham. ... ... „ 342
hispidissimus, Griff. ... „ 335
hostilis, *Wall.* ... ... „ 342
intermedius, *A. Rich.* ... „ 336
laguneoides, Edgew. ... „ 340
Lampas, Cav. ... ... „ 345
liliiflorus, Griff. ... ... „ 344
Lindleii, Wall. ... ... „ 335
longifolius, Roxb. ... ... „ 343
lunariifolius, *Willd.* ... „ 338
macrophyllus, *Roxb.* ... „ 337
Manihot, Linn. ... ... „ 341
micranthus, *Linn.* ... ... „ 335
mutabilis, *Linn.* ... ... „ 344
obtusifolius, Willd. ... ... „ 338
odoratus, Roxb. ... ... „ 331
ovalifolius, Vahl ... ... „ 336
panduræformis, *Burm.* ... „ 338
pentaphyllus, F. Muell. ... „ 340
pentaphyllus, Roxb. ... ... „ 341
phœniceus, Willd. ... ... „ 335
populneoides, Roxb. ... „ 345
populneus, Linn. ... ... „ 345
procerus, *Wall.* ... ... „ 339
prostratus, Roxb. ... ... „ 340
pruriens, Roxb. ... ... „ 338
pterospermoides, Wight ... „ 332
pumilus, Roxb. ... ... „ 336
punctatus, *Dalz.* ... ... „ 340
pungens, *Roxb.* ... ... „ 341
racemosus, Lindl. ... ... „ 338
radiatus, *Willd.* ... ... „ 335
rhombifolius, Cav. ... ... „ 344
ricinifolius, Wall. ... ... „ 342
rigidus, Linn. f. ... ... „ 335
Rosa-malabarica, Ker ... „ 335
Rosa-sinensis, *Linn.* ... „ 344
rugosus, *Mast.* ... ... „ 342
Sabdariffa, *Linn.* ... ... „ 340

Hibiscus — Vol. Page
sagittifolius, Kurz ... ... i. 342
? *sanguineus*, Griff. ... ... „ 340
scaber, Wall. ... ... „ 339
scandens, *Roxb.* ... .. „ 337
scandens, Dalz. & Gibs. ... „ 336
scindicus, *Stocks* ... ... „ 336
septemnervosus, Wight ... „ 337
serratus, Wall. ... ... „ 338
setosus, Roxb. ... ... „ 337
setosus, Wall. ... ... „ 338
sidoides, W. & A. ... ... „ 338
simplex, Roxb. ... ... „ 338
sinuatus, Cav. ... ... „ 340
Solandra, *L'Her.* ... ... „ 336
spathaceus, Wall. ... ... „ 342
strictus, Roxb. ... ... „ 340
suborbiculatus, Wall. ... „ 336
surattensis, *Linn.* ... ... „ 334
syriacus, *Linn.* ... ... „ 344
tetralocularis, Roxb. ... „ 345
tetraphyllus, *Roxb.* ... ... „ 341
tiliaceus, *Linn.* ... ... „ 343
tortuosus, Roxb. ... ... „ 343
tricuspis, *Banks* ... ... „ 344
Trionum, *Linn.* ... ... „ 334
truncatus, Roxb. ... ... „ 338
tubulosus, Cav. ... ... „ 338
velutinus, DC. ... ... „ 338
venustus, Bl. ... ... „ 344
vesicarius, Cav. ... ... „ 334
vestitus, Griff. ... ... „ 337
vestitus, Wall. ... ... „ 341
vitifolius, *Linn.* ... ... „ 338
Wightianus, Wall. ... ... „ 339
zeylanicus, Linn. ... ... „ 331
Hieracium, *Linn.* ... ... iii. 399
blattarioides, Linn. ... ... „ 394
corymbosum, Pers. ... ... „ 400
crocatum, *Fries* ... ... „ 400
dichotomum, Roxb. ... ... „ 415
heteranthum, Wall. ... ... „ 410
hispidum, D. Don ... ... „ 410
lanceolatum, Royle ... „ 400
lanceolatum, Vill. ... ... „ 401
Lessertianum, Wall. ... „ 409
murorum, Clarke ... ... „ 399
prenanthoides, *Villars* ... „ 400
sibiricum, Gmel. ... ... „ 394
silhetense, DC. ... ... „ 397
sylvaticum, Lamk. ... ... „ 399
umbellatum, *Linn.* ... ... „ 400
virosum, *Pall.* ... ... „ 400
vulgatum, *Koch* ... ... „ 399
Hierochloa, *Gmel.* ... ... vii. 222
Clarkei, *Hk. f.* ... ... „ 223
flexuosa, *Hk. f.* ... ... „ 222
gracillima, *Hk. f.* ... ... „ 223

Hierochloa — Vol. Page
Hookeri, *Clarke* ... ... vii. 223
khasiana, *Clarke* ... ... „ 223
? *latifolia*, Kunth ... ... „ 332
laxa, *Br.* ... ... „ 222
Higginsia longifolia, Bl. ... iii. 120
microcarpa, Bl. ... ... „ 120
Hildegardia populifolia, Br. i. 361
Hingtsha repens, Roxb. ... iii. 304
Hinterhubera (lapsu *Hinterpubera*)*Kotschyi*, Schultz iii. 310
Hippia bicolor, Sm. ... ... iii. 245
Hippion aquaticum, Schmidt iv. 110
hyssopifolium, Spreng. ... „ 101
longepedunculatum, Schmidt ... ... „ 109
orientale, Dalz. & Gibs. ... „ 101
verticillatum, Spreng. ... „ 101
Hippocratea, *Linn.* ... ... i. 623
angulata, Griff. ... ... „ 611
arborea, *Roxb.* ... ... „ 625
Arnottiana, *Wight* ... ... „ 624
barbata, F. Muell. ... ... „ 623
Cumingii, *Laws.* ... ... „ 624
disperma, Vahl ... ... „ 625
? *disperma*, Wall. ... ... „ 625
euonymoides, Vahl ... ... „ 625
Grahami, *Wight* ... ... „ 624
? *grandiflora*, Wall. ... ... „ 624
indica, *Willd.* ... ... „ 624
lanceolata, Wall. ... ... „ 624
Lobbii, *Laws.* ... ... „ 624
Maingayi, *Laws.* ... ... „ 625
obtusifolia, *Roxb.* ... ... „ 623
obtusifolia, Roxb. .. ... „ 625
obtusifolia, Wight ... ... „ 625
rigida, Hamp. ... ... „ 624
tortuosa, Wall. ... ... „ 624
volubilis, Heyne ... ... „ 624
HIPPOCRATEÆ ... ... i. 607
HIPPOMANEÆ... ... ... v. 244
Hippophae, *Linn.* ... v. 202
conferta, Wall. ... ... „ 203
rhamnoides, *Linn.* ... ... „ 203
salicifolia, *D. Don* ... ... „ 203
tibetana, Schlecht. ... ... „ 203
Hippuris, *Linn.* ... ... ii. 432
vulgaris, *Linn.* ... ... „ 432
Hiptage, *Gærtn.* ... ... i. 418
acuminata, *Wall.* ... ... „ 419
candicans, *Hk. f.* ... ... „ 419
Madablota, *Gærtn.* ... ... „ 418
parviflora, Wight ... ... „ 419
parvifolia, *W. & A.* ... ... „ 419
sericea, *Hk. f.* ... i. 419, iv. 596
sp., Wall. ... ... i. 419, ii. 448
Hiræa concava, Wall. ... ... i. 420
cordata, Heyne ... ... „ 421

Hiræa Vol. Page
Finlaysoniana, Wall. i. 422, ii. 462, 470
glabriuscula, Wall. ... i. 420
hirsuta, Wall. ... „ 421
indica, Roxb. ... „ 420
indica, Wall. ... „ 421
lanuginosa, Wall. ... „ 421
merguensis, Wight ... „ 420
nutans, Roxb. ... „ 421
nutans, Wall. ... „ 421
orbiculata, Roxb. ... „ 421
oxyphylla, Wall. ... „ 420
Hisutsua cantoniensis, DC. iii. 249
Hitchenia, *Wall.* ... vi. 224
Careyana, *Benth.* ... „ 225
caulina, *Baker* ... „ 224
glauca, *Wall.* ... „ 224
musacea, *Baker* ... „ 225
Roscoeana, Benth. ... „ 216
Hitchinia indica, W. & A. ... iv. 78
Hochstetteria, *DC.* ... iii. 387
Schimperi, *DC.* ... „ 388
Hodgsonia, *Hk. f. & T.* ... ii. 606
heteroclita, *Hk. f. & T.* ... „ 606
Holarrhena, *Br.* ... iii. 644
antidysenterica, *Wall.* ... „ 644
Codaga, G. Don ... „ 644
malaccensis, Wight ... „ 644
mitis, *Br.* ... „ 645
pubescens, Wall. ... „ 644
? *villosa*, Ait. ... „ 645
Holbœllia, *Wall.* ... i. 108
acuminata, Lindl. ... „ 108
angustifolia, Wall. ... „ 108
latifolia, *Wall.* ... „ 108
Holbœllia ornithocephala, Wall. ... vii. 98
Holcus, *Linn.* ... vii. 274
? *bicolor*, Linn. ... „ 184
Carar, Ham. ... „ 190
Catamucha, Ham. ... „ 182
cernuus, Ard. ... „ 184
ciliatus, Roxb. ... „ 71
cœrulescens, Gaud. ... „ 179
decolorans, Willd. ... „ 182
fulvus, Br. ... „ 185
Gryllus, Br. ... „ 188
halepensis, Linn. ... „ 182
lanatus, *Linn.* ... „ 274
latifolius, Osbeck ... „ 332
mollis, Linn. ... „ 274
montanus, Ham. ... „ 176
natans, Roxb. ... „ 62
nervosus, Roxb. ... vii. 70, 73
pallidus, Br. ... vii. 188
paniciformis, Roxb. ... „ 82
parviflorus, Br. ... „ 179

Holcus Vol. Page
pertusus, Linn. ... vii. 173
quinqueflorus, Ham. ... „ 185
racemosus, Forsk. ... „ 82
Sorghum, Linn. ... „ 183
spicatus, Linn. ... „ 82
? *Viranae*, Ham. ... „ 186
sp., Griff. ... „ 188
Holigarna, *Ham.* ... ii. 36
albicans, *Hk. f.* ... „ 38
Arnottiana, *Hk. f.* ... „ 36
Beddomei, *Hk. f.* ... „ 38
ferruginea, *March.* ... „ 37
Grahamii, *Hk. f.* ... „ 37
Grahamii, Kurz ... „ 38
Helferi, *Hk. f.* ... „ 37
longifolia, *Roxb.* ... „ 37
longifolia, W. & A. ... „ 36
racemosa, Roxb. ... „ 36
Holmskioldia, *Retz.* ... iv. 596
rubra, Pers. ... „ 596
sanguinea, *Retz.* ... „ 596
Holochilus micranthus, Dalz. iii. 552
Hologamium nervosum, Nees vii. 136
Holopeira auriculata, Miers i. 101
australis, Miers ... „ 101
fusiformis, Miers ... „ 101
læviuscula, Miers ... „ 101
laurifolia, Miers ... „ 101
villosa, Miers ... „ 101
HOLOPETALÆ ... i. 380
Holoptelea, *Planch.* ... v. 481
integrifolia, *Planch.* ... „ 481
Holoschænus australis, Rchb. vi. 655
filiformis, Rchb. ... „ 655
incurvatus, Dietr. ... „ 656
subarticulatus, Dietr. ... „ 656
vulgaris, Link ... „ 655
Holosetum philippinense, Steud. ... vii. 64
Holostemma, *Br.* ... iv. 21
Adakodien, R. & S. ... „ 21
Brunonianum, Royle ... „ 21
Candolleanum, Spreng. ... „ 21
fragrans, Wall. ... „ 21
læve, Bl. ... „ 23
Rheedei, *Wall.* ... „ 21
Rheedianum, Spreng. ... „ 21
Holosteum, *Linn.* ... i. 226
umbellatum, *Linn.* ... „ 227
Homœatherum chinense, Nees vii. 168, 170
Homalanthus, *A. Juss.* ... v. 468
populifolius, *Grah.* ... „ 469
Homalium, *Jacq.* ... ii. 595
fœtidum, *Benth.* ... „ 597
fœtidum, Kurz ... „ 598
grandiflorum, *Benth.* ... „ 598

Homalium Vol. Page
Griffithianum, *Kurz* ... ... ii. 597
longifolium, *Benth.* ... ... „ 596
longifolium, Benth. ... ... „ 597
minutiflorum, *Kurz* ... ... „ 596
nepalense, *Benth.* ... ... „ 596
propinquum, *Clarke* ... ... „ 597
Schlichii, *Kurz* ... ... „ 597
tomentosum, *Benth.* ... „ 596
travancoricum, *Bedd.* ... „ 598
zeylanicum, *Benth.* ... ... „ 596
Homalocenchrus oryzoides, Mieg. ... vii. 94
Homalomena, *Schott* ... ... vi. 531
angustifolia, *Hk. f.* ... ... „ 533
aromatica, *Schott* ... ... „ 532
cœrulescens, *Jungh.* ... „ 533
cordata, Schott ... ... „ 532
deltoidea, *Hk. f.* ... ... „ 536
elliptica, *Hk. f.* ... ... „ 536
Gaudichaudii, Schott ... „ 532
Griffithii, *Hk. f.* ... ... „ 534
humilis, *Hk. f.* ... ... „ 533
Kingii, *Hk. f.* ... ... „ 535
lancifolia, *Hk. f.* ... ... „ 533
majus, Griff. ... ... „ 533
minus, Griff. ... ... „ 533
nutans, *Hk. f.* ... ... „ 535
obliquata, *Hk. f.* ... ... „ 534
ovata, *Hk. f.* ... ... „ 536
paludosa, *Hk. f.* ... ... „ 531
pontederæfolia, *Griff.* ... „ 533
? *propinqua*, Schott ... ... „ 531
pumila, *Hk. f.* ... ... „ 535
purpurescens, Hook. ... „ 535
rostrata, *Griff.* ... ... „ 532
rubescens, *Kunth* ... ... „ 532
rubra, Hassk. ... ... „ 532
sagittæfolia, *Jungh.* ... „ 531
Soortechinii, *Hk. f.* ... ... „ 534
singaporensis, *Regel* ... „ 537
trapezifolia, *Hk. f.* ... ... „ 536
truncata, *Hk. f.* ... ... „ 535
velutina, *Scort.* ... ... „ 534
Wallichii, Schott ... ... „ 533
Homocentria vagans, Naud. ... ii. 526
Homonoia, *Lour.* ... ... v. 455
retusa, *Muell.* ... ... „ 456
riparia, *Lour.* ... ... „ 455
symphilliæfolia, Kurz ... „ 456
Homoplitis crinita, Trin. ... vii. 141
Homostyles tenerrima, Wall. iv. 44
Homostylium cabulicum, Nees iii. 257
Hopea, Linn. ... ... iii.
racemosa, Dalz. & Gibs. ... „ 582
spicata, Dalz. & Gibs. ... „ 573
Hopea, *Roxb.* ... ... i. 308
decandra, Buch. ... ... „ 308
Hopea Vol. Page
discolor, *Thw.* ... ... i. 310
eglandulosa, Roxb. ... i. 308, v. 342
faginea, Hort. Calc. ... i. 308
faginea, Wall. ... ... „ 301
floribunda, Wall. ... ... „ 304
glabra, *W. & A.* ... ... „ 309
grandiflora, Wall. ... ... „ 301
gratissima, Wall. ... ... „ 307
Griffithii, *Kurz* ... ... „ 310
jucunda, *Thw.* ... ... „ 310
longifolia, *Dyer* ... ... „ 309
micrantha, *Hk. f.* ... ... „ 310
oblongifolia, *Dyer* ... ... „ 309
odorata, *Roxb.* ... ... „ 308
odorata, Wall. ... ... „ 308
parviflora, *Bedd.* ... ... „ 308
parviflora, Bedd. ... ... „ 309
racophlœa, *Dyer* ... ... „ 310
Scaphula, Roxb. ... ... „ 301
suava, Wall. ... ... „ 304
suavis, Kurz ... ... „ 304
vasta, Wall. ... ... „ 308
Wightiana, *Wall.* ... ... „ 309
Wightiana, Miq. ... ... „ 308
Hoppea, *Willd.* ... ... iv. 100
dichotoma, *Willd.* ... ... „ 100
dichotoma, Vahl ... ... „ 100
fastigiata, *Clarke* ... ... „ 100
HORDEÆ ... ... vii. 9, 364
Hordeum, *Linn.* ... ... vii. 371
Aegiceras, Royle ... ... „ 371
brevitubulatum, Link ... „ 372
cœleste, Koern. & Wern. ... „ 372
cœleste, Viborg ... ... „ 371
Decaisneanum, Hort. ... „ 372
distichon, *Linn.* ... ... „ 371
distichum, Kunth ... ... „ 372
gymnodistichum, Watt ... „ 372
heterostachyum, Beauv. ... „ 371
hexastichon, Linn. ... ... „ 371
? *himalayense*, Rittig ... „ 372
ithaburense, Boiss. ... ... „ 372
leporinum, Link ... ... „ 372
maritimum, Roth ... ... „ 372
murinum, *Linn.* ... ... „ 372
nepalense, Sweet ... ... „ 371
nodosum, Linn. ... ... „ 372
nudum, Ard. ... ... „ 372
pratense, Huds. ... ... „ 372
sativum, Pers. ... ... „ 371
secalinum, *Schreb.* ... ... „ 372
spontaneum, *C. Koch* ... „ 372
? *sylvaticum*, Duthie ... „ 374
trifurcatum, Fisch. & Mey. „ 371
vaginatum, C. Koch ... ... „ 372
vulgare, *Linn.* ... ... „ 371
Hornemannia bicolor, Willd. iv. 259

Hornemannia Vol. Page
ovata, Link & Otto ... iv. 279
pinnata, Benth. ... „ 288
prostrata, Jack ... „ 281
Hornstedtia, Retz. ... vi. 236
Leonurus, Retz. ... „ 236
Scyphus, Retz. ... „ 237
Horsfieldia odorata, Willd.... v. 106
Hortonia, *Wight* ... v. 115
acuminata, Wight ... „ 115
floribunda, *Wight* ... „ 115
ovalifolia, Wight ... „ 115
Hosackia indica, Grah. ... ii. 63
Hottonia indica, Linn. ... iv. 271
serrata, Willd. ... v. 659
sessiflora, Vahl ... ii. 434, iv. 270
Houttuynia, *Thunb.* ... v. 78
cordata, *Thunb.* ... „ 78
Hovenia, *Thunb.* ... i. 640
acerba, Lindl. ... „ 640
dulcis, *Thunb.* ... „ 640
inæqualis, DC. ... „ 640
Hoya, *Br.* ... iv. 52
acuminata, *Benth.* ... „ 53
Arnottiana, *Wight* ... „ 60
bella, *Hook.* ... „ 56
Brunoniana, Wight ... „ 61
campanulata, Bl. ... „ 62
carnosa, Br. ... „ 62
caudata, *Hk. f.* ... „ 60
cinnamomifolia, Hook. ... „ 57
coriacea, *Bl.* ... „ 61
coriacea, Lindl. ... „ 52
coronaria, *Bl.* ... iv. 58, 62
crassifolia, *Haw.* ... iv. 62
diversifolia, *Bl.* ... „ 61
Edeni, *King* ... „ 53
elliptica, *Hk. f.* ... „ 58
Finlaysonii, *Wight* ... „ 62
fusca, *Wall.* ... „ 58
globulosa, *Hk. f.* ... „ 60
Griffithiana, Dcne. ... „ 53
Griffithii, *Hk. f.* ... „ 59
gymnanthera, Wight ... „ 62
Hookeriana, Wight ... „ 57
imperialis, *Lindl.* ... „ 59
Lacuna, Ham. ... „ 47
lacunosa, *Bl.* ... „ 55
lanceolata, *Wall.* ... „ 54
latifolia, *G. Don* ... „ 57
latifolia, Wall. ... „ 62
linearis, *Wall.* ... „ 53
Lobbii, *Hk. f.* ... „ 54
longifolia, *Wall.* ... „ 56
macrophylla, Wight ... „ 57
Maingayi, *Hk. f.* ... „ 62
micrantha, *Hk. f.* ... „ 55
multiflora, *Bl.* ... „ 52
Hoya Vol. Page
nicobarica, Br. ... iv. 62
Nummularia, *Dcne.* ... „ 55
obcordata, *Hk. f.* ... „ 56
oblanceolata, *Hk. f.* ... „ 57
obtusifolia, *Wight* ... „ 58
opposita, D. Don ... „ 62
orbiculata, Wall. ... „ 61
ovalifolia, *W. & A.* ... „ 60
ovalifolia, Wall. ... „ 55
pallida, Dalz. & Gibs. ... „ 59
pallida, Lindl. ... „ 57
parasitica, *Wall.* ... „ 57
parviflora, *Wight* ... „ 54
pauciflora, *Wight* ... „ 56
pendula, *Wight* ... „ 61
pendula, W. & A. ... iv. 59, 62
planiflora, Wall. ... iv. 45
polyneura, *Hk. f.* ... „ 54
polystachya, Bl. ... „ 57
retusa, *Dalz.* ... „ 56
revoluta, *Wight* ... „ 55
Rumphii, Bl. ... „ 62
serpens, *Hk. f.* ... „ 55
? *Shepherdii*, Hook. ... „ 57
? *speciosa*, Dcne. ... „ 59
teretifolia, *Griff.* ... „ 54
Teysmanniana, Miq. ... „ 58
Thomsoni, *Hk. f.* ... „ 61
vaccinioides, *Hk. f.* ... „ 56
velutina, Wight ... „ 58
verticillata, G. Don ... „ 62
viridiflora, Br. ... „ 46
Wallichiana, Dcne. ... „ 62
Wightiana, Thw. ... „ 56
Wightii, *Hk. f.* ... „ 59
sp., Hk. f. & T. iv. 54, 59, 60, 61
sp., Wall. ... iv. 57
Hugonia, *Linn.* ... i. 413
ferruginea, *W. & A.* ... „ 413
Mystax, *Linn.* ... „ 413
obovata, Ham. ... „ 413
HUGONIEÆ ... i. 410
Hullettia, *King* ... v. 547
dumosa, *King* ... „ 547
Griffithiana, *King* ... „ 547
Humboldtia, *Vahl* ... ii. 273
Brunonis, *Wall.* ... „ 274
laurifolia, *Vahl* ... „ 273
unijuga, *Bedd.* ... „ 274
Vahliana, *Wight* ... „ 274
Humea elata, Roxb. ... i. 381
Humulus, *Linn.* ... v. 486
Lupulus, *Linn.* ... „ 487
Hunteria, *Roxb.* ... iii. 637
? *atroviridis*, Wall. ... „ 626
? *coriacea*, Wall. ... „ 635
corymbosa, *Roxb.* ... „ 637

Hunteria Vol. Page
? *cuspidata*, Wall. ... ... iii. 629
eugenifolia, Wall. ... ... „ 653
? *fascicularis*, Wall. ... „ 636
? *gracilis*, Wall. ... ... „ 634
? *lanceolata*, Wall. ... ... „ 637
Roxburghiana, Wight ... „ 637
zeylanica, Gard. ... ... „ 637
? *sp.*, Wall. ... ... „ 624
Hura siamensium, Kœn. ... vi. 205
Hutchinsia calycina, Desv.... i. 159
procumbens, Desv. ... ... „ 159
tibetica, Thoms. ... ... „ 159
sp., Griff. ... ... „ 139
Hyacinthorchis variabilis, Bl. vi. 16
Hyacinthus purpureus, Griff. vi. 349
serotinus, Linn. ... ... „ 346
Hyalisma janthina, Champ. vi. 558
Hyalostemma Roxburghiana, Wall. ... ... i. 87
Hydnocarpus, *Gærtn.* ... ... i. 196
alpina, *Wight* ... ... „ 197
castanea, *Hk. f. & T.* ... „ 197
inebrians, Vahl. ... ... „ 196
inebrians, Wall. ... ... „ 196
octandra, *Thw.* ... ... „ 197
venenata, *Gærtn.* ... ... „ 196
Wightiana, *Bl.* ... ... „ 196
Hydnophytum, *Jack* ... ... iii. 194
formicarium, *Jack* ... ... „ 194
montanum, Bl. ... ... „ 194
Hydrangea, *Linn.* ... ... ii. 403
altissima, *Wall.* ii. 404, see errata
anomala, *D. Don* ... ... „ 405
aspera, *D. Don* ... ... „ 404
cyanema, Nutt. ... ... „ 404
heteromalla, D. Don ... „ 405
khasiana, Hk. f. & T. ... „ 405
robusta, *Hk. f. & T.* ... „ 405
scandens, Maxim. ... ... „ 404
stylosa, *Hk. f. & T.* ... ... „ 405
vestita, *Wall.* ... ... „ 405
HYDRANGEÆ ... ... ii. 388
Hydrilla, *Rich.* ... ... v. 659
angustifolia, Bl. ... ... „ 659
dentata, Casp. ... ... „ 659
ovalifolia, Rich. ... ... „ 659
verticillata, *Casp.* ... ... „ 659
verticillata, Rich. ... ... ii. 432
Wightii, Planch. ... ... v. 659
HYDRILLEÆ ... ... v. 658
Hydrobryum, *Endl.* ... ... v. 63
Griffithii, *Tul.* ... ... „ 64
griseum, Tul. ... ... „ 66
lichenoides, Kurz ... ... „ 67
olivaceum, Tul. ... ... „ 66
Hydrocera, *Bl.* ... ... i. 483
angustifolia, Bl. ... ... „ 483
Hydrocera Vol. Page
triflora, *W. & A.* ... ... i. 483
HYDROCHARIDEÆ ... ... v. 658
Hydrocharis, *Linn.* ... ... v. 662
asiatica, Miq. ... ... „ 662
Morsus-ranæ, *Linn.* ... „ 662
Hydrocotyle, *Linn.* ... ... ii. 667
asiatica, *Linn.* ... ... „ 669
burmanica, *Kurz* ... ... „ 668
conferta, *Wight* ... ... „ 668
densiflora, DC. ... ... „ 668
Heyneana, Wall. ... ... „ 667
hirsuta, Bl. ... ... „ 667
hirta, R. Br. ... ... „ 667
hispida, D. Don ... ... „ 667
javanica, *Thunb.* ... ... „ 667
laxiflora, DC. ... ... „ 668
lurida, Hance ... ... „ 669
nepalensis, Hook. ... ... „ 667
nitidula, A. Rich. ... ... „ 668
perexigua, Hance ... ... „ 668
podantha, Molkenb. ... „ 668
polycephala, W. & A. ... „ 667
puncticulata, Miq. ... ... „ 668
ranunculoides, Bl. ... ... „ 668
rotundifolia, *Roxb.* ... ... „ 668
sibthorpioides, Lam. ... ... „ 669
strigosa, Ham. ... ... „ 667
tenella, D. Don ... ... „ 668
Wightiana, Wall. ... ... „ 669
zeylanica, DC. ... ... „ 667
Zollingeri, Molkenb. ... „ 668
Hydrolea, *Linn.* ... ... iv. 133
javanica, Bl. ... ... „ 134
zeylanica, *Vahl* ... ... „ 133
Hydrolythrum, *Hk. f.* ... ii. 571
Wallichii, *Hk. f.* ... . „ 572
Hydropeltis purpurea, Rich... i. 113
Hydrophylax, *Linn. f.* ... iii. 199
maritima, *Linn. f.* ... ... „ 199
HYDROPHYLLACEÆ ... ... iv. 133
Hydropityon pedunculatum, Seringe ... ... iv. 271
Hydroschoenus, Moritz. ... vi. 597
kyllingioides, Zoll. & Mor. „ 597
Hydrotrophus echinospermus, Clarke ... ... v. 661
Hygrophila, *Br.* ... ... iv. 406
angustifolia, Br. ... ... „ 407
assurgens, Nees ... ... „ 407
dimidiata, Nees ... ... „ 407
incana, *Nees* ... ... „ 408
longifolia, Kurz ... ... „ 409
obovata, Griff. ... ... „ 408
obovata, Nees ... ... „ 408
obovata, Wight ... ... „ 408
phlomoides, *Nees* ... ... „ 408
polysperma, *T. Anders.* ... „ 406

Hygrophila Vol. Page
quadrivalvis, *Nees* ... ... iv. 408
radicans, Nees ... ... „ 407
salicifolia, *Nees* ... ... „ 407
Serpyllum, *T. Anders.* ... „ 406
spinosa, *T. Anders.* ... ... „ 408
Stocksii, *T. Anders.* ... „ 407
undulata, Nees ... ... „ 408
Hygrorhiza, *Nees* ... ... vii. 94
aristata, *Nees* ... ... „ 95
Hylophila, *Lindl.* .. vi. 110, 179
lanceolata, *Hk. f.* ... ... vi. 110
mollis, *Lindl.* ... ... „ 110
Hymenachne myuros, Beauv. vii. 39
myurus, Hk. f. & T. ... „ 40
indica, Bühse ... ... „ 41
interrupta, Bühse ... ... „ 41
? *phalaroides*, Nees ... ... „ 41
sp., Hk. f. & T. ... ... „ 240
Hymenandra, *A. DC.* ... ... iii. 532
Wallichii, *A. DC.* ... ... „ 532
Hymeneria, Lindl. ... ... v. 785
Hymenidium Brunonis, Lindl. ii. 706
? *densiflorum*, Lindl. ... „ 706
? *suaveolens*, Klotz. ... ... „ 706
Hymenocallis tenuiflora, Herb. vi. 286
Hymenocalyx variabilis, Zenk. ... ... i. 341
Hymenocardia, *Wall.* ... v. 376
plicata, Kurz ... ... „ 425
punctata, *Wall.* ... ... „ 377
Wallichii, Tulasne ... ... „ 377
Hymenochæte grossa, Nees ... vi. 660
Kysoor, Nees ... . „ 660
maxima, Nees ... ... „ 660
Hymenodictyon, *Wall.* ... iii. 35
excelsum, *Wall.* ... ... „ 35
flaccidum, *Wall.* ... ... „ 36
Horsfieldianum, Miq. ... „ 35
obovatum, *Wall.* ... ... „ 36
obovatum, Wight ... ... „ 35
thyrsiflorum, Wall. ... ... „ 35
utile, Wight ... ... „ 35
Hymenolæna angelicoides, DC. ii. 703
Benthami, DC. ... ... „ 703
Brunonis, DC. ... ... „ 706
Candollii, DC. ... ... „ 703
dentata, DC. ... ... „ 704
Govaniana, DC. ... ... „ 702
latifolia, Lindl. ... ... „ 703
Lindleyana, Klotz. ... ... „ 705
nana, Ost.-Sack. ... ... „ 705
obtusiuscula, DC. ... ... „ 673
pimpinellifolia, Ost.-Sack. „ 703
pumila, DC. ... ... „ 704
rotundata, DC. ... ... „ 703
stellata, Lindl. ... ... „ 705
sp., Hk. f. & T. ... ... „ 705

Hymenopogon, *Wall.* ... iii. 34
assamicus, *Hk. f.* ... ... „ 34
parasiticus, *Wall.* ... ... „ 34
Hymenopyramis, *Wall.* ... iv. 598
brachiata, *Wall.* ... ... „ 598
Hymenospermum dentatum, Benth. ... ... iv. 297
HYOSCYAMEÆ ... ... iv. 228
Hyoscyamus, *Linn.* ... ... iv. 244
agrestis, Kitaibel ... ... „ 244
angulatus, Griff. ... ... „ 245
betæfolius, Lamk. ... ... „ 245
Datora, Forsk. ... ... „ 245
insanus, Stocks ... ... „ 245
muticus, *Linn.* ... ... „ 245
niger, *Linn.* ... ... „ 244
persicus, Bühse ... ... „ 244
præaltus, Walp. ... ... „ 244
pusillus, *Linn.* ... ... „ 245
Hypælyptum argenteum, Vahl vi. 667
ceylanicum, Nees ... ... „ 667
microcephalum, Br. ... ... „ 668
sphacelatum, Vahl ... ... „ 667
sp., Griff. ... ... „ 603
Hyparrhenia finitima, Anderss. ... ... vii. 209
Hypecoum, *Tourn.* ... ... i. 120
leptocarpum, *Hk. f. & T.* „ 120
procumbens, *Linn.* ... ... „ 120
Hypelytrum, see Hypolytrum ... ... vi. 677
Hyperanthera decandra, Willd. ... ... ii. 45
Moringa, Vahl ... ... „ 45
HYPERICEÆ ... ... i. 252
Hypericinea angustata, Wall. ii. 24
dentata, Wall. ... ... i. 416
lucida, Wall. ... ... ii. 24
macrocarpa, Wall. ... ... i. 417
micrantha, Wall. ... ... ii. 466
pedunculosa, Wall. ... ... i. 416
pimentifolia, Wall. ... ... ii. 466
HYPERICINEÆ ... ... i. 252
Hypericum, *Linn.* ... ... i. 253
acutum, Wall. ... ... „ 253
adenophorum, Wall. ... „ 256
alternifolium, Vahl ... ... „ 294
arborescens, Vahl ... ... „ 258
bracteatum, Wall. ... ... „ 253
breviflorum, *Wall.* ... ... „ 257
calycatum, Jacquem. ... „ 256
calycinum, Linn. ... ... „ 253
carneum, Wall. ... ... „ 257
cernuum, *Roxb.* ... ... „ 253
chinense, Linn. ... ... „ 253
Choisianum, Wall. ... ... „ 254
coccineum, Wall. ... ... „ 258

Hypericum Vol. Page
cordifolium, *Chois.* ... ... i. 258
coriaceum, Royle ... ... „ 254
elodeoides, *Chois.* ... ... „ 255
erectum, Thunb. ... ... „ 255
filicaule, Hk. f. & T. ... „ 252
fœtidum, Hk. f. & T. ... „ 257
gnidiæfolium, Rich. ... ... „ 253
Govanianum, Wall. ... „ 253
grandifolium, Chois. ... „ 253
Griffithii, *Hk. f. & T.* ... „ 253
Hookerianum, *W. & A.* ... „ 254
horridum, Wall. ... ... „ 257
humifusum, *Linn.* ... i. 255, 256
intermedium, Steud. ... i. 256
japonicum, *Thunb.* ... ... „ 256
Lalandii, *Chois.* ... ... „ 256
Leschenaultii, Chois. ... „ 254
lysimachioides, *Wall.* ... „ 254
monanthemum, *Hk. f. & T.* „ 256
monogynum, Willd. ... ... „ 253
montanum, Linn. ... ... „ 256
myrtifolium, Spach ... „ 253
mysorense, *Heyne* ... ... „ 253
napaulense, *Chois.* ... ... „ 256
neriifolium, Wall. ... .. „ 257
nervosum, D. Don ... ... „ 256
oblongifolium, Chois. ... „ 253
oblongifolium, Hook. ... „ 254
oblongifolium, Wall. ... ... „ 254
pallens, D. Don ... ... „ 256
patulum, *Thunb.* ... ... „ 254
perforatum, *Linn.* ... ... „ 255
petiolatum, Walt. ... ... „ 257
petiolulatum, *Hk. f. & T.* „ 255
prunifolium, Wall. ... ... „ 258
pulchellum, Wall. ... ... „ 257
pusillum, Chois. ... ... „ 256
reptans, *Hk. f. & T.* ... „ 255
rubrum, Wight ... ... „ 255
salicifolium, S. & Z. ... „ 253
Sampsoni, *Hance* ... ... „ 255
setosum, Wall. ... ... „ 256
speciosum, Wall. ... ... „ 253
tenicaule, *Hk. f. & T.* ... „ 254
triflorum, Bl. ... ... „ 254
uralum, Ham. ... ... „ 254
Wightianum, Wall. ... ... „ 256
Hypobathrum, Bl. ... ... iii. 120
racemosum, Kurz ... ... „ 120
strictum, Kurz ... ... „ 121
Hypobrichia Spruceana, Benth. ii. 568
Hypochæris, *Linn.* ... ... iii. 400
glabra, *Linn.* ... ... „ 401
Hypoestes, *R. Br.* ... ... iv. 557
Decaisneana, Nees ... ... „ 558
lanata, *Dalz.* ... ... „ 557
laxiflora, Nees ... ... „ 558

Hypoestes Vol. Page
malaccensis, *Wight* ... ... iv. 558
purpurea, R. Br. ... ... „ 557
triflora, *R. & S.* ... ... „ 557
Wallichii, Nees ... ... „ 557
Hypogynium, Hack. ... .. vii. 168
HYPOLYTREÆ ... ... vi. 587
Hypolytrum, *Rich.* ... ... vi. 677
borneense, Kurz .. ... „ 680
compactum, ? Moritz. ... „ 682
costatum, Thw. ... ... „ 684
diandrum, Dietr. ... ... „ 678
giganteum, Nees ... ... „ 678
giganteum, Wall. ... ... „ 678
humile, Boeck. ... ... „ 682
latifolium, *Rich.* ... ... „ 678
latifolium, Dietr. ... ... „ 678
latifolium, Thw. ... ... „ 679
longirostre, *Thw.* ... ... „ 679
mauritianum, Boeck. ... „ 678
myrianthum, Miq. ... ... „ 678
Pandanophyllum, F.Muell. „ 680
penangense, *Clarke*... ... „ 679
proliferum, *Boeck.* ... ... „ 679
schœnoides, Nees ... ... „ 678
triceps, Dietr. ... ... „ 667
trinervium, *Kunth* ... ... „ 679
turgidum, *Clarke* ... ... „ 679
Wightianum, *Boeck.* ... „ 678
sp., Wall. ... ... vi. 662, 678, 680
Hypopithys, *Scop.* ... ... iii. 476
lanuginosa, *Nutt.* .. ... „ 476
Hypoporum, Nees ... ... vi. 685
annulare, Nees ... ... „ 687
capitatum, Nees ... ... „ 689
gracile, Nees ... ... „ 685
lithospermum, Nees ... ... „ 685
Roxburghii, Nees ... ... „ 686
HYPOXIDEÆ ... ... vi. 277
Hypoxidopsis pumila, Steud. vi. 357
Hypoxis, *Linn.* ... ... vi. 277
aurea, *Lour.* ... ... „ 277
brachystachya, Wight ... „ 279
curculigoides, Wall. ... „ 278
dulcis, Steud. ... ... „ 279
Franquevillei, Miq. ... ... „ 278
latifolia, Wight ... ... „ 279
leptostachya, Wight... ... „ 279
minor, D. Don ... ... „ 278
pauciflora, Wight ... ... „ 279
Saarpata, Ham. ... ... „ 278
trichocarpa, Wight ... ... „ 279
Hypserpa cuspidata, Miers i. 100
pauciflora, Miers ... ... „ 100
prævaricata, Miers ... ... „ 100
uniflora, Miers ... ... „ 100
Hyptianthera, *W. & A.* ... iii. 121
macrocarpa, Thw. ... ... „ 122

Hyptianthera Vol. Page
  rhamnoides, Morr. & Zoll. ... iii. 135
  stricta, *W. & A.* ... „ 121
  stricta, Wall. ... „ 187
Hyptis, *Jacq.* ... iv. 630
  brevipes, *Poit.* ... „ 630
  stachyodes, Link ... „ 644
  suaveolens, *Poit.* ... „ 630
Hyrtanandra hirta, Miq. ... v. 586
  javanica, Miq. ... „ 583
  pentandra, Miq. ... „ 583
  triandra, Miq. ... „ 587
  Walkeriana, Thw. ... „ 583
Hyssopus, *Linn.* ... iv. 649
  cristatus, Lamk. ... „ 631
  lophanthoides, Ham. iv. 618, 624
  ocymifolius, Lamk. ... iv. 646
  officinalis, *Linn.* ... „ 649
Hysteria veratrifolia, Reinw. vi. 91

Iberidella, *Boiss.* ... i. 162
  Andersoni, *Hk. f. & T.* ... „ 163
ICACINEÆ ... i. 573
Ichnanthus, *Sw.* ... vii. 60
  foliolosus, *Munro* ... „ 61
  pallens, *Munro* ... „ 60
Ichnocarpus, *Br.* ... iii. 669
  affinis, Hk. f. & T. ... „ 670
  dasycalyx, Miq. ... „ 669
  fragrans, Wall. ... „ 667
  frutescens, *Br.* ... „ 669
  ? *inflata*, Ham. ... „ 667
  latifolia, Ham. ... „ 670
  leptodictyus, Muell. ... „ 669
  ovatifolius, *A. DC.* ... „ 670
  pubiflorus, *Hk. f.* ... „ 670
  radicans, Wall. ... „ 669
Icica dentata, DC. ... i. 506
  indica, W. & A. ... „ 531
Ifloga, *Cass.* ... iii. 277
  cauliflora, Clarke ... „ 278
  Fontanesii, *Cass.* ... „ 277
  spicata, Schultz ... „ 278
Iguanura, *Bl.* ... vi. 415
  bicornis, *Becc.* ... „ 417
  brevipes, *Hk. f.* ... „ 416
  corniculata, *Becc.* ... „ 417
  diffusa, *Becc.* ... „ 416
  geonomæformi , *Mart.* ... „ 415
  malaccensis, *Becc.* ... „ 416
  parvula, *Becc.* ... „ 417
  polymorpha, *Becc.* ... „ 417
  Wallichiana, *Hk. f.* ... „ 426
Ilex, *Linn.* ... i. 598
  asiatica, Linn. ... „ 606
  cymosa, *Bl.* ... „ 605
  daphnephylloides, Kurz i. 606, ii. 747

Ilex Vol. Page
  denticulata, *Wall.* ... i. 600
  dipyrena, *Wall.* ... „ 599
  ? *elliptica*, D. Don ... „ 603
  emarginella, Turcz. ... „ 600
  embelioides, *Hk. f.* ... „ 601
  excelsa, *Wall.* ... „ 603
  exsulca, Wall. ... „ 603
  fragilis, *Hk. f.* ... „ 602
  Gardneriana, *Wight* ... „ 603
  gaultheriæfolia, Kurz ... „ 601
  Godajam, *Colebr.* ... „ 604
  Griffithii, *Hk. f.* ... „ 601
  Horsfieldii, Miq. ... „ 602
  insignis, *Hk. f.* ... „ 599
  intricata, *Hk. f.* ... „ 602
  latifolia, Thunb. ... „ 599
  macrophylla, *Wall.* ... „ 604
  Maingayi, *Hk. f.* ... „ 605
  malabarica, *Bedd.* ... „ 600
  niligirica, Miq. ... „ 600
  odorata, *Ham.* ... „ 599
  rotunda, Thunb. ... „ 604
  sclerophylla, *Hk. f.* ... „ 606
  singapuriana, Wall. ... „ 605
  spicata, *Bl.* ... „ 598
  sulcata, *Wall.* ... „ 604
  theæfolia, *Hk. f.* ... „ 601
  theæfolia, Hk. f. ... iii. 512
  Thomsoni, *Hk. f.* ... i. 602
  venulosa, *Hk. f.* ... „ 602
  Walkeri, *Wt. & Gard.* ... „ 600
  Walkerii, Turcz. ... „ 600
  Wallichii, *Hk. f.* ... „ 605
  Wightiana, *Wall.* ... „ 603
  Wightiana, Dalz. & Gibs. „ 600
  ? *sp.*, Wall. ... „ 599
Ilicinea, ? Wall. ... i. 605
ILICINEÆ ... i. 598
ILLECEBRACEÆ ... iv. 711
Illecebrum bengalense, Linn. iv. 731
  brachiatum, Linn. ... „ 726
  javanicum, Ait. ... „ 727
  lanatum, Linn. ... „ 728
  Monsonium, Linn. ... „ 729
  pubescens, Willd. ... „ 729
  verticillatum, Burm. ... i. 247
Illicium, *Linn.* ... i. 39
  Griffithii, *Hk. f. & T.* i. 40, 281
  majus, *Hk. f. & T.* ... i. 40
Illigera, *Bl.* ... ii. 460
  appendiculata, Bl. ... „ 460
  Coryzadenia, *Meissn.* ... „ 460
  khasiana, *Clarke* ... „ 461
  Kurzii, *Clarke* ... „ 460
  obtusa, Meissn. ... „ 461
Ilysanthes, *Rafin.* ... iv. 283
  gratioloides, Regel ... „ 281

Ilysanthes Vol. Page
hyssopioides, Benth. ... iv. 283
minima, *Benth.* ... ... ,, 284
parviflora, *Benth.* ... ... ,, 283
rotundifolia, *Benth.* ... ,, 284
Impatiens, *Linn.* ... ... i. 440
acaulis, *Arn.* ... ... ,, 443
acuminata, *Benth.* ... ... ,, 462
Akka, Bedd. ... ... ,, 443
albida, Wight ... ... ,, 458
amphorata, *Edgew.* .. i. 475, 476
amplexicaulis, *Edgew.* ... i. 469
anamalayensis, Bedd. ... ,, 452
angustiflora, *Hk. f.* ... ... ,, 480
appendiculata, *Arn.* ... ,, 464
arcuata, Wall ... ... ,, 454
arguta, *Hk. f. & T.* ... ... ,, 470
Arnottiana, Miq. ... ... ,, 446
Arnottii, *Thw.* ... ... ,, 466
assamensis, Griff. ... ... ,, 483
auriculata, *Wight* ... ... ,, 460
Ballardi, *Bedd.* ... ... ,, 482
Balsamina, *Linn.* ... ... ,, 453
Balsamina, Dalz. ... ... ,, 454
Balsamina, Linn. ... ... ,, 454
Beddomei, *Hk. f.* ... ... ,, 442
bella, *Hk. f. & T.* ... ... ,, 458
bicolor, Royle ... ... ,, 476
bicornuta, *Wall.* ... ... ,, 475
bifida, Thunb. ... ... ,, 457
biglandulosa, Moon ... ... ,, 463
bipartita, Arn. ... ... ,, 457
brachycentra, *Kar. & Kir.* ,, 481
bracteata, Coleb. ... ... ,, 461
brevicornu, Arn. ... ... ,, 455
bulbosa, Moon ... ... ,, 443
calycina, Wall. ... ... ,, 472
campanulata, *Wight* ... ,, 463
candida, Lindl. ... ... ,, 469
capillipes, *Hk. f. & T.* ... ,, 456
Cathcartii, *Hk. f.* ... ... ,, 473
chinensis, *Linn.* ... ... ,, 444
circæoides, *Wall.* ... ... ,, 453
circæoides, Turcz. ... ... ,, 452
clavicornu, Turcz. ... ... ,, 483
coccinea, Wall. ... ... ,, 454
concinna, *Hk. f.* ... ... ,, 449
cordata, *Wight* ... ... ,, 462
cornigera, *Arn.* ... ... ,, 466
cornigera, Hook. ... ... ,, 454
cornuta, Linn. ... ... ,, 454
crenata, *Bedd.* ... . ,, 442
cristata, Wall. ... ... ,, 472
cuspidata, W. & A. ... ... ,, 450
cymbifera, *Hk. f.* ... ... ,, 474
Dalzellii, *Hk. f. & T.* ... ,, 449
dasysperma, *Wight* ... ... ,, 457
debilis, Turcz. ... ... ,, 483

Impatiens Vol. Page
Denisonii, *Bedd.* ... ... i. 444
depauperata, *Hk. f.* ... ... ,, 481
discolor, *Wall.* ... ... ,, 471
diversifolia, *Wall.* ... ... ,, 446
Edgeworthii, *Hk. f.* ... ,, 476
elata, Edgew. ... ... ,, 481
elegans, *Bedd.* ... . ,, 465
elongata, *Arn.* ... ... ,, 466
eriantha, Turcz. ... ... ,, 457
fasciculata, Lamk. ... ... ,, 444
filiformis, W. & A. ... i. 447, 448
fimbriata, *Hook.* ... ... i. 461
flaccida, *Arn.* ... ... ,, 457
flavida, *Hk. f. & T.* ... .. ,, 452
floribunda, Wight ... ... ,, 457
fruticosa, *DC.* ... ... ,, 459
Gardneriana, *Wight* .. ,, 445
Gardneriana, Wight ... ,, 450
gibbosa, Arn. ... ... ,, 455
gigantea, Edgew. ... ... ,, 469
glandulifera, *Arn.* ... ... ,, 454
glandulifera, Royle ... ... ,, 468
glauca, *Hk. f. & T.* ... ... ,, 482
Goughii, *Wight* ... ... ,, 452
gracilis, Bedd. ... ... ,, 443
grandis, *Heyne* ... ... ,, 463
Griffithii, *Hk. f. & T.* ... ,, 445
Hamiltoniana, D. Don ... ,, 472
Henslowiana, *Arn.* ... ... ,, 458
heterophylla, Wall. ... i. 444, 446
hispidula, Benth. ... i. 470
Hoffmeisteri, Klotz. ... ... ,, 471
Hookeriana, *Arn.* ... ... ,, 463
inconspicua, *Benth.* .. ,, 447
inconspicua, Wight ... ... ,, 448
insignis, *DC.* ... ... ,, 477
janthina, *Thw.* ... ... ,, 461
Jerdoniæ, *Wight* ... ... ,, 460
Jurpia, *Ham.* ... ... ,, 471
Kleinii, *W. & A.* ... ... ,, 445
lævigata, *Wall.* ... ... ,, 473
latiflora, *Hk. f. & T.* ... ,, 459
latifolia, *Linn.* ... ... ,, 450
latifolia, Hook. ... ... ,, 457
latifolia, Moon ... ... ,, 457
latifolia, W. & A. ... ... ,, 451
Lawii, *Hk. f. & T.* ... ... ,, 448
laxiflora, *Edgew.* i. 479, 480, 483
laxiflora, Hk. f. & T. ... i. 481
laxiflora ? Wall. ... ... ,, 478
leptoceras, *DC.* ... ... ,, 477
leptopoda, *Arn.* ... ... ,, 455
leptura, *Hk. f.* ... ... ,, 467
Leschenaultii, *Wall.* ... ,, 450
leucantha, *Thw.* ... ... ,, 464
ligulata, *Bedd.* ... ... ,, 446
linearis, *Arn.* ... ... ,, 464

Impatiens ... Vol. Page
lineata, Turcz. ... ... i. 468
Lobbiana, Turcz. ... ... „ 454
longicornu, Wall. i. 475, 476, 477
longiflora, Heyne ... ... i. 447
longifolia, Wight ... ... „ 454
longipes, *Hk. f. & T.* ... „ 473
lucida, *Heyne* ... ... „ 451
macrochila, Lindl. ... ... „ 469
macrophylla, *Gardn.* ... „ 454
maculata, *Wight* ... ... „ 465
malayensis, Griff. ... ... „ 483
micrantha, D. Don ... ... „ 479
micranthemum, *Edgew.* ... „ 481
mishmiensis, *Hk. f.* ... ... „ 476
modesta, *Wight* ... ... „ 442
mollis, Wall. ... ... „ 470
moschata, Edgew. ... ... „ 469
multiflora, Wall. ... ... „ 470
Munronii, *Wight* ... ... „ 456
mysorenis, *Roth* ... ... „ 456
mysorensis, Roth ... ... „ 447
mysorensis, Wall. ... ... „ 447
natans, Willd. ... ... „ 483
Noli-me-tangere ... ... „ 482
odorata, D. Don ... ... „ 477
oppositifolia, *Linn.* ... ... „ 448
orchioides, *Bedd.* ... ... „ 443
pallens, Edgew. ... ... „ 476
paludosa, *Hk. f.* ... ... „ 480
parasitica, Bedd. ... ... „ 460
Parishii, *Hk. f.* ... ... „ 456
parvifolia, *Bedd.* ... ... „ 453
pendula, *Heyne* ... ... „ 455
Perrottetii, Turcz. ... ... „ 447
phœnicea, *Bedd.* ... ... „ 466
picta, Kn. & West. ... ... „ 476
porrecta, *Wall.* ... ... „ 472
puberula, *DC.* ... ... „ 470
pulcherrima, *Dalz.* ... ... „ 458
pulchra, *Hk. f. & T.* ... „ 459
pulniensis, Bedd. ... ... „ 452
pusilla, Heyne ... ... i. 447, 448
racemosa, *DC.* ... ... i. 479
racemosa, Hk. f. & T. ... „ 476
racemosa, Wall. ... ... i. 478, 479
racemulosa, *Wall.* ... ... i. 468
radiata, *Hk. f.* ... ... „ 476
radicans, *Benth.* ... ... „ 451
ramosissima, Dalz. ... i. 447, 448
repens, *Moon* ... ... i. 455
reticulata, *Wall.* ... ... „ 448
rivalis, *Wight* ... ... „ 444
rosea, Lindl. ... ... „ 454
rosmarinifolia, Retz. i. 447, 448
rosmarinifolia, Wight i. 447, 448
Roylei, *Walp.* ... ... i. 468
Roylei, Klotz. ... ... „ 476

Impatiens ... Vol. Page
rufescens, Benth. ... ... i. 449
salicifolia, *Hk. f. & T.* ... „ 450
salicifolia, Turcz. ... i. 450, 454
scabrida, *DC.* ... ... i. 472
scabriuscula, *Heyne*... ... „ 454
scapiflora, *Heyne* ... ... „ 443
scapiflora, Hook. ... ... „ 443
scapiflora, W. & A. ... ... „ 442
semiverticillata, *Turcz.* ... „ 482
serrata, *Benth.* ... ... „ 473
setacea, Colebr. ... ... „ 444
setosa, *Hk. f. & T.* ... ... „ 455
spirifer, *Hk. f. & T.* ... „ 471
stenantha, *Hk. f.* ... ... „ 478
Stocksii, *Hk. f. & T.* ... „ 442
subcordata, *Arn.* ... ... „ 461
sulcata, *Wall.* ... ... i. 469, 475
Tangachee, *Bedd.* ... ... i 467
tavoyana, *Benth.* ... ... „ 468
tenella, *Heyne* ... ... „ 447
tenella, Rottl. ... ... „ 447
tenella, Wall. ... ... „ 446
tenuicula, Steud. ... ... „ 447
tenuis, Bedd. ... ... „ 442
Thomsoni, *Hk. f.* ... ... „ 469
tingens, Edgew. ... ... „ 479
tomentosa, *Heyne* ... ... „ 449
tomentosa, Dalz. ... ... „ 447
travancorica, *Bedd.* ... „ 464
tricornis, Lindl. ... ... „ 472
triflora, Linn. ... ... „ 483
trilobata, *Colebr.* ... ... „ 451
tripetala, *Roxb.* ... ... „ 470
tropæolifolia, *Griff.* ... „ 472
truncata, *Thw.* ... ... „ 455
tuberculata, *Hk. f. & T.* ... „ 478
umbellata, *Heyne* ... ... „ 461
umbrosa, Edgew. ... ... „ 476
umbrosa, Hk. f. ... ... „ 476
uncinata, *Wight* ... ... „ 465
urticifolia, *Wall.* ... ... „ 474
verrucosa, Bedd. ... ... „ 444
verticillata, *Wight* ... ... „ 452
violæflora, *Hk. f.* ... ... „ 457
viridiflora, *Wight* ... ... „ 460
viscida, *Wight* ... ... „ 462
viscosa, *Bedd.* 452, 453
Walkeri, *Hook.* ... ... i. 467
Wightiana, *Bedd.* ... ... „ 467
Imperata, *Cyrill.* ... ... vii. 106
Allang, Jungh. ... ... „ 106
arundinacea, *Cyrill.* ... „ 106
caudata, Trin. ... ... „ 107
condensata, Steud. ... ... „ 106
cylindrica, Beauv. ... ... „ 106
exaltata, *Brongn.* ... ... „ 107
filifolia, Nees ... ... „ 106

Imperata Vol. Page
?jaculatoria, R. & S. ... vii. 107
Kœnigii, Beauv. ... ... „ 106
pedicellata, Steud. ... ... „ 106
ramosa, Anderss. ... ... „ 107
Sieberi, Opiz. ... ... „ 106
Sisca, Beauv. ... ... „ 106
spontanea, Beauv. ... ... „ 119
Thunbergii, Nees ... ... „ 106
Incarvillea arguta, Royle ... iv. 385
diffusa, Royle ... ... „ 385
Emodi, Wall. ... ... „ 385
oblongifolia, Roxb. ... ... „ 359
parasitica, Roxb. ... ... „ 338
Indeterminata, Wall. ... i. 498, 520, 627; ii. 22, 50, 106, 240, 657; iii. 132; vi. 299
Indigastrum, deflexum, J. & S. ii. 97
Indigofera, *Linn.* ... ... ii. 92
adenophylla, Grah. ... ... „ 96
æruginis, Schweinf. ... „ 94
anabaptista, *Steud.* ... ... „ 102
anceps, Vahl ... ... „ 98
angulosa, *Edgew.* ... ... „ 97
arborea, Roxb. ... . „ 101
arcuata, Willd. ... ... „ 96
argentea, *Linn.* ... ... „ 98
argentea, Roxb. ... ... „ 97
argentea, Wall. ... ... „ 96
armata, Wall. ... ... „ 96
articulata, Gouan ... ... „ 98
aspalathifolia, Roxb. ... „ 94
aspalathoides, *Vahl*... ... „ 94
asperifolia, Hochst. ... „ 94
atropurpurea, *Ham.* ... „ 101
brachycarpa, Grah. ... ... „ 99
bracteata, *Grah.* ... ... „ 100
Brunoniana, *Grah.* ... ... „ 93
cærulea, Roxb. ... ... „ 99
cæspitosa, Wight ... ... „ 94
caloneura, *Kurz* ... ... „ 93
canescens, Grah. ... ... „ 96
canescens, Lamk. ... ... „ 96
capitata, Grah. ... ... „ 81
cassioides, Rottl. ... ... „ 101
cinerea, Willd. ... ... „ 96
congesta, Grah. ... ... „ 96
cordifolia, *Heyne* ... ... „ 93
cylindracea, *Wall.* ... ... „ 99
debilis, Grah. ... ... „ 98
desmodioides, Benth. ... „ 153
Dosua, *Ham.* ... ... „ 102
Dosua, Wall. ... ... „ 100
echinata, *Willd.* ... ... „ 92
elliptica, Roxb. ... ... „ 101
endecaphylla, *Jacq.* ... „ 98
enneaphylla, *Linn.* ... ... „ 94
ferruginea, Sch. & Th. ... „ 98

Indigofera Vol. Page
Finlaysoniana, Wall. ... ii. 100
flaccida, Kœn. ... ... „ 97
flexuosa, Grah. ... ... „ 113
foliolosa, Grah. ... . „ 99
fragrans, Retz. ... ... „ 95
frumentacea, Roxb. ... ... „ 94
fusca, G. Don ... ... „ 98
galegoides, *DC.* ... ... „ 100
Gerardiana, *Wall.* ... ... „ 100
Gibsonii, Grah. ... ... „ 101
glabra, Linn. ... ... „ 95
glandulosa, *Willd.* ... ... „ 94
glauca, Lamk. ... ... „ 98
glaucescens, Grah. ... .. „ 101
glutinosa, Perr. ... ... „ 95
glutinosa, Roxb. ... ... „ 95
graveolens, Roxb. ... ... „ 95
Hamiltonii, Grah. ... ... „ 101
hebepetala, *Benth.* ... ... „ 101
hedysaroides, Lamk. ... „ 96
heterantha, Wall. ... ii. 100, 102
heterophylla, Roxb.... ... ii. 97
hirsuta, *Linn.* ... ... „ 98
Hochstetteri, Baker ... ... „ 102
inamœna, Thw. ... ... „ 99
indica, Lamk. ... ... „ 99
Jirahulia, Ham. ... ... „ 101
Kleinii, W. & A. ... ... „ 98
lateritia, Willd. ... ... „ 95
leptostachya, *DC.* ... ... „ 100
Leschenaultii, DC. ... ... „ 96
linearis, Guill. & Perr. ... „ 97
linifolia, *Retz.* ... ... „ 92
marginulata, *Grah.* ... „ 97
moluccana, DC. ... ... „ 96
mucronata, Spreng. ... „ 97
multicaulis, DC. ... ... „ 96
mysorensis, *Rottl.* ... ... „ 102
orixensis, Roxb. ... ... „ 96
ornithopodioides, Hochst. . „ 102
parviflora, *Heyne* ... ... „ 97
pauciflora, *Delile* ... ... „ 97
pedicellata, *W. & A.* ... „ 95
pentaphylla, *Linn.* ... ... „ 95
peregrina, DC. ... ... „ 96
polyphylla, DC. ... ... „ 100
polyphylla, Heyne ... ... „ 102
polyphylla, Rottl. ... ... „ 99
prostrata, Roxb. ... ... „ 92
prostrata, Willd. ... ... „ 96
pulchella, *Roxb.* ... ... „ 101
purpurascens, Roxb. ... „ 101
pusilla, Lamk. ... ... „ 98
quadrangularis, Grah. ... „ 100
retusa, Grah. ... ... „ 99
rigida, Willd. ... ... „ 96
scabra, Roth ... ... „ 97

Indigofera Vol. Page
Schimperiana, Hochst. ... ii. 98
semitrijuga, *Forsk.* ... „ 98
stachyodes, Lindl. ... „ 102
subulata, *Vahl* ... „ 96
sumatrana, Gærtn. ... „ 99
tenuifolia, *Rottl.* ... „ 95
ternata, Roxb. ... „ 96
Thonningii, Sch. & Th. ... „ 97
timoriensis, Willd. ... „ 96
tinctoria, *Linn.* ... „ 99
tinctoria, Forsk. ... „ 98
tomentosa, Grah. ... „ 102
trifoliata, *Linn.* ... „ 96
trigonelloides, *J. & S.* ... „ 94
triquetra, *Dalz.* ... „ 93
trita, *Linn. f.* ... „ 96
uncinata, Roxb. ... „ 100
uniflora, *Ham.* ... „ 94
verrucosa, Grah. ... „ 101
vestita, *Baker* ... „ 96
violacea, Roxb. ... „ 101
virgata, DC. ... „ 96
virgata, Roxb. ... ii. 100, 102
viscosa, *Lamk.* ... ii. 95
Wightii, *Grah.* ... „ 99
Zollingeriana, Miq. ... „ 100
Inga, *Willd.* ... ii. 306
acutangula, Grah. ... „ 306
annularis, Grah. ... „ 303
attenuata, Grah. ... „ 305
bigemina, Willd. ... „ 303
bubalina, Jack ... „ 304
bubalina, Wall. ... „ 304
Clypearia, Jack ... „ 305
Clypearia, Wall. ... „ 304
concordiana (*corcondiana*) DC. ... „ 303
contorta, Grah. ... „ 305
cynometroides, *Bedd.* ... „ 306
dimidiata, Hk. & Arn. ... „ 305
dolabriformis, Grah. ... „ 286
dulcis, Willd. ... „ 302
Finlaysoniana, Grah. ... „ 305
Finlaysoniana, Wall. ... „ 301
flexuosa, Grah. ... „ 303
geminata, W. & A. ... „ 303
grandiflora, Wall. ... „ 301
Jiringa, Wall. ... „ 304
Koenigii, W. & A. ... „ 303
lignosa, Grah. ... „ 286
lobata, Grah. ... „ 305
lucida, Wall. ... ii. 299, 303
subfalcata, Zoll. ... ii. 306
umbellata, Willd. ... „ 303
umbrosa, Wall. ... „ 302
ventricosa, Grah. ... „ 301
Wightiana, Grah. ... „ 303

Inga Vol. Page
xylocarpa, DC. ... ii. 286
Inodaphnis lanceolata, Miq. i. 392
Intsia coriacea, Maingay ... ii. 275
palembanica, Miq. ... „ 275
Inula, *Linn.* ... iii. 291
acuminata, *DC.* ... „ 294
appendiculata, Wall. ... „ 297
asperrima, Edgew. ... „ 293
auriculata, Wall. ... „ 297
? *brahuica*, Boiss. ... „ 292
Cappa, *DC.* ... „ 295
cuspidata, *Clarke* ... „ 296
cutchica, Clarke ... „ 296
dysenterica, Linn. ... „ 298
eriophora, DC. ... „ 295
eupatorioides, *DC.* ... „ 295
Falconeri, *Hk. f.* ... „ 294
gnaphaloides, Vent. ... „ 299
grandiflora, *Willd.* ... „ 294
grantioides, *Boiss.* ... „ 296
graveolens, *Desf.* ... „ 292
Griffithii, *Clarke* ... „ 296
Helenium, Hk. f. & T. ... „ 292
Hookeri, *Clarke* ... „ 294
indica, Linn. ... „ 297
Kalapani, *Clarke* ... „ 295
? *macrocephala*, Kotschy „ 292
macrosperma, *Hk. f.* ... „ 292
nervosa, *Wall.* ... „ 293
nitida, Edgew. ... „ 293
obtusifolia, *Kerner* ... „ 293
Oculus-Christi, Clarke „ 293
polycephala, Klatt ... „ 296
polygonata, *DC.* ... „ 293
Pseudo-Cappa, DC. ... „ 295
Pulicaria, Linn. ... „ 298
quadrifida, Ham. ... „ 299
racemosa, *Hk. f.* ... „ 292
rhizocephaloides, *Clarke* ... „ 295
rhizocephala, Schrank. ... „ 295
Royleana, *DC.* ... „ 292
Royleana, Clarke ... „ 292
rubricaulis, *Clarke* ... „ 296
salicina, Clarke ... „ 294
salviodora, Schultz ... „ 295
Simonsii, *Clarke* ... „ 293
Stoliczkai, Clarke ... „ 292
Thomsoni, Clarke ... „ 293
verrucosa, Klatt ... „ 293
vestita, Wall. ... „ 297
INULOIDEÆ ... iii. 221, 260
Involucraria Wallichii, Ser. ii. 607
Iodes, *Bl.* ... i. 595
? Brandisii, *Kurz* ... „ 596
Hookeriana, *Baill.* ... „ 596
oblonga, *Planch.* ... „ 597
ovalis, *Bl.* ... „ 596

Iodes Vol. Page
Thomsoniana, *Baill.* ... i. 596
tomentella, Miq. ... ,, 596
Ione bicolor, Lindl. ... v. 770
candida, Lindl. ... ,, 770
cirrhata, Lindl. ... ,, 769
fusco-purpurea, Lindl. ... ,, 769
khasiana, Lindl. ... ,, 770
paleacea, Lindl. ... ,, 769
virens, Lindl. ... ,, 770
Ionidium, *Vent.* ... i. 185
enneaspermum, DC. ... ,, 185
erectum, DC. ... ,, 185
heterophyllum, DC. ... ,, 185
hexaspermum, Dalz. ... ,, 185
leptorhizum, DC. ... ,, 185
ramosissimum, *Thw.* ... ,, 186
suffruticosum, *Ging.* ... ,, 185
Wightianum, Wall. ... ,, 185
Ioniris Doniana, Klatt ... vi. 272
fragrans, Klatt ... ,, 272
Pallasii, Klatt ... ,, 272
triflora, Klatt ... ,, 272
Iphigenia, *Kunth* ... vi. 357
caricina, Kunth ... ,, 357
indica, *Kunth* ... ,, 357
pallida, *Baker* ... ,, 357
racemosa, Kunth ... ,, 357
Iphisia Govanii, Wight ... iv. 40
multiflora, W. & A. ... ,, 40
Ipomæa, *Linn.* ... iv. 196
acetosæfolia, R. & S. ... ,, 213
aculeata, Bl. ... ,, 197
anceps, R. & S. ... ,, 212
angularis, Chois. ... ,, 213
angustifolia, *Jacq.* ... ,, 205
aquatica, *Forsk.* ... ,, 210
atropurpurea, Chois. ... ,, 194
atrosanguinea, Hook. ... ,, 191
barbata, Chois. ... ,, 195
barbata, Roth ... ,, 199
barlerioides, *Benth.* ... ,, 201
Batatas, *Lamk.* ... ,, 202
Beladamboe, *R. & S.* ... ,, 209
bicolor, Sweet ... ,, 216
bifida, Roth ... ,, 211
biloba, *Forsk.* ... ,, 212
? bipedunculata, *Clarke* ... ,, 215
blanda (lapsu *Olanda*), Sweet ... ,, 211
Bona-nox, *Linn.* ... ,, 197
Bona-nox, Bl. ... ,, 197
bracteata, *Wight* ... ,, 203
bracteata, Bl. ... ,, 216
bracteata, Grah. ... ,, 188
Buchananii, Chois. ... ,, 210
caliginosa, Chois. ... ,, 211
calycina, *Benth.* ... ,, 201

Ipomæa Vol. Page
calycina, Benth. ... iv. 208
campanulata, *Linn.* ... ,, 211
capitata, R. & S. ... ,, 193
capitellata, Chois. ... ,, 204
cariosepala, Klotz. ... ,, 201
carnosa, *Br.* ... ,, 213
Catesbæi, Mey. ... ,, 202
chryseides, *Ker* ... ,, 206
Clarkei, *Hk. f.* ... ,, 734
coccinea, *Linn.* ... ,, 199
cærulea, Koen. ... ,, 199
cærulescens, Roxb. ... ,, 200
compressa, *Guss.* ... ,, 215
coptica, Roth ... ,, 200
cuspidata, *D. Don* ... ,, 215
cymbalaria, Fenzl ... ,, 206
cymosa, *R. & S.* ... ,, 211
cymosa, Baker ... ,, 208
cynanchifolia, *Clarke* ... ,, 208
dasysperma, *Jacq.* ... ,, 215
dentata, Willd. ... ,, 206
denticulata, *Chois.* ... ,, 208
denticulata, Br. ... ,, 205
dichroa, Chois. ... ,, 213
digitata, *Linn.* ... ,, 202
Dillenii, R. & S. ... ,, 199
dissecta, *Willd.* ... ,, 200
dissecta, Chois. ... ,, 214
elliptica, Roth ... ,, 192
eriocarpa, *Br.* ... ,, 204
eriosperma, Beauv. ... ,, 202
fastigiata, *Sweet* ... ,, 209
fastigiata, Chois. ... ,, 187
filicaulis, Bl. ... ,, 205
gangetica, Sweet ... ,, 184
gemella, Chois. ... ,, 207
gemella, Roth ... ,, 206
glaberrima, Bojer ... ,, 198
Glenieii, *Thw.* ... ,, 208
Gomezii, *Clarke* ... ,, 211
gossypifolia, Willd. ... ,, 202
grandiflora, *Lamk.* ... ,, 198
grandiflora, Roxb. ... ,, 197
hederacea, *Jacq.* ... ,, 199
hepaticifolia, Burm. ... ,, 204
hepaticifolia, Linn. ... ,, 204
Heynei, R. & S. ... ,, 211
Heynei, Wall. ... ,, 209
hirsuta, Br. ... ,, 214
hispida, R. & S. ... ,, 204
Horsfieldiana, Miq. ... ,, 204
imbricata, Roth ... ,, 191
insignis, Andr. ... ,, 202
insuavis, Bl. ... ,, 207
involucrata, Beauv. ... ,, 203
jucunda, Thw. ... ,, 198
kentrocaulis, *Clarke* ... ,, 213

Ipomæa Vol. Page
Kleiniana, R. & S. ... ... iv. 188
laciniata, *Clarke* ... ... „ 200
lanceolata, G. Don ... ... „ 201
laurifolia, Sweet ... ... „ 192
ligulata, Bojer ... ... „ 204
lilacina, Bl. ... ... „ 184
linifolia, *Bl.* ... ... „ 205
littoralis, Boiss. ... ... „ 213
littoralis, Thw. ... ... „ 208
longiflora, Br. ... ... „ 198
longifolia, Benth. ... ... „ 213
luteola, Jacq. ... ... „ 199
macrantha, R. & S. ... ... „ 198
malabarica, R. & S.... ... „ 189
maritima, Br. ... ... „ 212
mauritiana, Jacq. ... ... „ 202
melanosticta, G. Don ... „ 184
microphylla, Roth ... iv. 216, 218
multiflora, *Roxb.* ... ... iv. 215
muricata, *Jacq.* ... ... „ 197
nicobarica, Kurz ... ... „ 208
Nil, Roth ... ... „ 199
noctiflora, Griff. ... ... „ 197
noctiluca, Herb. ... ... „ 197
obscura, *Ker* ... ... „ 207
obscura, Hassk. ... ... „ 207
ochroleuca, Spanog. ... „ 207
ocularis, Bartl. ... ... „ 207
Olanda, vide *blanda* ... „ 211
osyrensis, Roth ... ... „ 192
ovalifolia, Chois. ... ... „ 216
palmata, *Forsk.* ... ... „ 214
paniculata, Br. ... ... „ 202
paniculata, Burm. ... ... „ 220
parviflora, Pers. .. ... „ 220
peltata, Chois. ... . „ 211
pendula, Br. ... ... „ 214
pentadactylis, Chois. ... „ 214
pentaphylla, *Jacq.* ... ... „ 202
Pes-Capræ, Roth ... ... „ 212
Pes-tigridis, *Linn.* ... ... „ 204
petaloidea, *Chois.* ... ... „ 212
phœnicea, Roxb. ... ... „ 199
pileata, *Roxb.* ... ... „ 203
pilosa, *Sweet* ... ... „ 213
pilosa, Cav. ... ... „ 202
platensis, Ker ... ... „ 202
polyantha, *Miq.* ... ... „ 206
poranoides, *Clarke* ... ... „ 208
pulchella, Roth... ... ... „ 214
punctata, Pers. ... ... „ 199
purpurea, *Lamk.* .. ... „ 200
Quamoclit, *Linn.* ... ... „ 199
quinata, *Br.* ... ... „ 214
racemosa, Roth ... ... „ 210
reniformis, *Chois.* ... ... „ 206
repens, Lamk. ... ... „ 209
repens, Roth ... ... iv. 210
reptans, Poir. ... ... „ 210
rhyncorhiza, *Dalz.* ... „ 214
Rothii, R. & S. ... ... „ 211
Roxburghii, Steud. ... ... „ 197
rubens, Chois. ... ... „ 195
rugosa, Chois. ... ... „ 209
rumicifolia, *Chois.* ... ... „ 207
sagittata, Roxb. ... ... „ 201
salicifolia, *Roxb.* ... ... „ 210
scabra, Chois. ... ... „ 200
senegalensis, Lamk. ... ... „ 214
sepiaria, *Kœn.* ... ... iv. 209, 216
sessiliflora, Roth ... ... iv. 204
setulosa, Zoll. ... ... „ 205
sibirica, *Pers.* ... ... „ 207
sidæfolia, Chois. ... ... „ 216
sinuata, *Orteg.* ... ... „ 214
speciosa, Bl. ... ... „ 185
sphærocephala, D. Don ... „ 194
sphærocephala, Sweet ... „ 204
splendens, Sims ... ... „ 186
staphylina, *R. & S.* ... „ 210
stipulacea, Jacq. ... ... „ 214
stipulacea, Sweet ... ... „ 209
Stocksii, *Clarke* ... ... „ 204
Stocksii, Clarke... ... iv. 207, 734
striata, Roth ... ... iv. 209
strigosa, Roth ... ... „ 194
subdentata, Miq. ... iv. 208, 210
subtriflora, Zoll. ... ... iv. 206
subtrilobans, Miq. ... ... „ 209
tamnifolia, Burm. ... ... „ 204
tiliæfolia, R. & S. ... ... „ 184
timorensis, Bl. ... ... „ 216
triantha, R. & S. ... iv. 209, 216
trichosperma, *Bl.* ... .. iv. 198
tridentata, *Roth* ... ... „ 205
triquetra, R. & S. ... ... „ 212
Tuba, G. Don ... ... „ 198
tuberculata, Ker ... ... „ 215
tuberculata, R. & S. ... „ 214
tuberosa, Linn. .. ... „ 214
tuberosa, G. Mey. ... ... „ 202
tuberosa, A. Rich. ... ... „ 213
Turpethum, *Br.* ... ... „ 212
uniflora, *R. & S.* ... ... „ 201
vitifolia, *Sweet* ... ... „ 213
Wallichii, Steud. ... ... „ 216
Weinmanni, R. & S. ... „ 216
Wightii, *Chois.* ... ... „ 203
xanthantha, Kurz ... ... „ 212
Yomæ, Kurz ... ... „ 198
zeylanica, Gaertn. ... iv. 187, 196
sp., Hk. f. & T. iv. 188, 200, 208, 212
Ipsea, *Lindl.* ... ... v. 812, vi. 178
malabarica, *Hk. f.* ... ... v. 812

Ipsea Vol. Page
speciosa, *Lindl.* ... ... v. 812
? Wrayana, *Hk. f.* ... ... „ 812
Iresine javanica, Burm. ... iv. 727
persica, Burm. ... ... „ 727
IRIDEÆ ... ... vi. 271
Iridorchis gigantea, Bl. ... vi. 12
Irina glabra, Bl. ... ... i. 691
integerrima, Bl. ... ... ii. 7
Iris, *Linn.* ... ... vi. 271
Aitchisoni, *Boiss.* ... ... „ 272
aurea, *Lindl.* ... ... „ 273
biglumis, Vahl ... ... „ 272
Clarkei, *Baker* ... ... „ 275
crocea, Jacq. ... ... „ 273
decora, Wall. ... ... „ 274
deflexa, *Kn. & Westc.* ... „ 275
Doniana, Spach ... ... „ 272
Duthieii, *M. Fost.* ... ... „ 275
ensata, *Thunb.* ... ... „ 272
fragrans, Lindl. ... ... „ 272
gilgitensis, *Baker* ... ... „ 274
goniocarpa, *Baker* ... .. „ 274
halophila, Ker ... ... „ 272
Hookeriana, *M. Fost.* ... „ 275
kashmiriana, *Baker* ... ... „ 275
Kingiana, M. Fost. .. ... „ 274
kumaonensis, Wall. ... „ 274
longifolia, Royle ... ... „ 276
longispatha, Fisch. ... ... „ 272
Milesii, *M. Fost.* ... ... „ 273
Moorcroftiana, Wall. ... „ 272
nepalensis, *D. Don* ... ... „ 273
nepalensis, D. Don ... ... „ 276
nepalensis, Wall. ... vi. 275, 276
Notha, M. Bieb. ... ... vi. 272
pabulina, Naud. ... ... „ 272
Pallasii, Fisch. ... ... „ 272
ruthenica, Ait. ... ... „ 276
Sisyrinchium, Linn. ... „ 272
spuria, *Linn.* ... ... „ 272
Stocksii, Boiss. ... ... „ 272
sulcata, Wall. ... ... „ 274
tigrina, Jacq. ... ... „ 274
triflora, Balbis ... ... „ 272
Wattii, *Baker* ... ... „ 273
Xiphion, Linn. ... ... „ 272
Irvingia, *Hk. f.* ... ... i. 522
malayana, *Oliv.* ... ... „ 522
Isachne, *Br.* ... ... vii. 21
adstans, Miq. ... ... „ 25
albens, *Trin.* ... ... „ 22
atro-virens, Trin. ... ... „ 25
australis, *Br.* ... ... „ 24
australis, Aitch. ... .. „ 23
brachyglumis, Hochst. ... „ 271
Clarkei, *Hk. f.* ... ... „ 24
dispar, *Trin.* ... ... „ 26

Isachne Vol. Page
dispar, Wight ... ... vii. 21
elatior, *Hk. f.* ... ... „ 22
elegans, *Dalz.* ... ... „ 23
firmula, Büse ... ... „ 24
Gardneri, *Benth.* ... ... „ 26
geniculata, Griff. ... ... „ 25
himalaica, *Hk. f.* ... ... „ 23
javana, *Nees* ... ... „ 24
Kunthiana, *W. & A.* ... „ 21
lepidota, Steud. ... ... „ 25
Lisboæ, *Hk. f.* ... ... „ 22
mauritiana, Kunth ... ... „ 25
meneritana, Poir. ... ... „ 25
Metzii, Hochst. ... ... „ 21
miliacea, *Roth* ... ... „ 25
minutula, Kunth ... ... „ 25
monticola, Büse ... ... „ 24
multiflora, *Trim.* ... ... „ 22
muricata, Munro ... ... „ 23
muricata, Nees ... ... „ 26
Myosotis, Benth. ... ... „ 24
Neesiana, Arn. ... ... „ 21
nilagirica, Hochst. ... ... „ 26
nilagirica, Trim. ... ... „ 26
perpusilla, W. & A. ... ... „ 271
polygonoides, Doell ... ... „ 25
pulchella, Roth ... . „ 246
rigida, *Nees* ... . „ 24
scabrosa, *Hk. f.* ... ... „ 23
stigmatosa, Griff. ... ... „ 25
tricarinata, Roth ... ... „ 44
ventricosa, Doell ... .. „ 59
virgata, Nees ... ... „ 23
Walkeri, *W. & A.* ... ... „ 26
sp., Wall. ... vii. 22, 23, 25, 47, 51
Isanthera, *Nees* ... ... iv. 372
floribunda, Gardn. ... ... „ 372
permollis, *Nees* ... ... „ 372
ISATIDEÆ ... ... i. 130
Isatis, *Linn.* ... ... i. 163
costata, *C. A. Mey* ... ... „ 163
spartioides, Edgew. ... ... „ 164
tinctoria, *Linn.* ... ... „ 163
Isauxis cordifolia, Thw. ... i. 303
Roxburghiana, Thw. ... „ 303
Ischæmum, *Linn.* ... ... vii. 126
abbreviatum, Ham. ... ... „ 31
angustifolium, *Hack.* . . „ 129
aristatum, *Linn.* ... ... „ 126
aristatum, Burm. ... ... „ 127
aristatum, Willd. ... ... „ 133
barbatum, Hack. ... ... „ 127
barbatum, Ham. ... ... „ 133
barbatum, Retz. ... ... „ 127
barbatum, Rottl. ... ... „ 127
ciliare, Retz. ... ... „ 133
ciliare, Nees ... ... „ 140

Ischæmum Vol. Page
  Colladoa, Spreng. ... ... vii. 127
  commutatum, *Hack.* ... ,, 131
  conjugatum, *Roxb.* ... ... ,, 131
  conjugatum, Thw. ... ... ,, 130
  corollatum, Nees ... ... ,, 139
  corrugatum, Ham. ... ... ,, 127
  crinitum, Trin.... ... ... ,, 141
  cuspidatum, Roxb ... ... ,, 151
  denticulatum, Ham.... ... ,, 142
  diplopogon, *Hk. f.* ... ... ,, 129
  ensiforme, Ham. ... ... ,, 151
  falcatum, Thw. ... ... ,, 140
  fasciculatum, Ham. ... ... ,, 31
  fasciculatum, Rottl.... ... ,, 127
  Feildingianum, *Rendle* ... ,, 132
  geniculatum, Hochst. ... ,, 127
  geniculatum, Roxb. ... ... ,, 133
  glabratum, Presl ... ... ,, 133
  glabrescens, Ham. ... ... ,, 31
  heterotrichum, *Hack.* ... ,, 134
  hirsutum, Nees... ... ... ,, 162
  hirtum, *Hack.* ... ... ,, 135
  hispidum, H. B. K. ... ... ,, 73
  Huegelii, *Hack.* ... ... ,, 139
  imberbe, Hack. ... ... ,, 127
  imberbe, Retz. ... ... ,, 126
  impressum, *Hack.* ... ... ,, 132
  inscalptum, Hochst. ... ,, 136
  involucratum, Russ.... ... ,, 151
  involutum, Forst. ... ... ,, 91
  Kingii, *Hk. f.* ... ... ,, 129
  Kœnigii, Hk. f.... ... ... ,, 127
  laxum, *Br.*... ... ... ,, 136
  leersioides, Munro ... ... ,, 140
  Lisboæ, *Hk. f.* ... ... ,, 133
  longispicatum, Munro ... ,, 140
  macrostachyum, Hochst.... ,, 136
  magnum, *Rendle* ... ... ,, 128
  mastucatum, Trin. ... ... ,, 162
  melicoides, Kœn. ... vii. 70, 284
  molle, *Hk. f.* ... ... vii. 128
  montanum, Russ. ... ... ,, 136
  murinum, *Forst.* ... ... ,, 135
  muticum, *Linn* ... ... ,, 132
  Myurus, Linn. ... ... ,, 154
  nervosum, Thw. ... ... ,, 136
  notatum, *Hack.* ... ... ,, 138
  paleaceum, Trin. ... ... ,, 142
  papposum, Rottl. ... ... ,, 301
  pectinatum, Benth. ... ... ,, 140
  pectinatum, Trin. ... ... ,, 140
  pectinatum, Wight ... ... ,, 140
  petiolare, *Hack.* ... ... ,, 138
  pilosum, *Hack.*... ... ... ,, 130
  ramosissimum, *Hack.* ... ,, 137
  repens, Roxb. ... ... ,, 133
  rivale, Hack. ... ... ,, 135

Ischæmum Vol. Page
  robustum, *Hk. f.* ... ... vii. 139
  Rottleri, Hk. f. ... ... ,, 127
  Royleanum, Miq. ... ... ,, 127
  rugosum, *Salisb.* ... ... ,, 127
  scrobiculatum, W. & A. ... ,, 133
  secundatum, Walt. ... ... ,, 91
  segetum, Trin. ... ... ,, 127
  Sehima, Spreng. ... ... ,, 136
  semisagittatum, *Roxb.* ... ,, 130
  semisagittatum, Thw. ... ,, 131
  sparteum, Ham. ... ... ,, 129
  spathiflorum, *Hk. f.* ... ,, 138
  speciosum, Nees ... ... ,, 152
  sulcatum, *Hack.* ... ... ,, 137
  tenellum, Roxb. ... ... ,, 136
  tenue, Ham. ... ... ,, 133
  timorense, *Kunth* ... ... ,, 136
  sp., Griff. ... ... ,, 136
  sp., Trin. ... ... ,, 367
Ischnochloa, *Hk. f.* ... vii. 147, 421
  Falconeri, *Hk. f.* ... . . vii. 148
Ischurochloa floribunda, Büse vii. 391
  spinosa, Büse ... ... ,, 395
Iseilema, *Hack.* ... ... vii. 217, 421
  anthephoroides, *Hack.* ... vii. 219
  argutum, *Anderss.* ... ... ,, 218
  laxum, *Hack.* ... ... ,, 218
  prostratum, Anderss. ... ,, 218
  Wightii, *Anderss.* ... ... ,, 218
Isolepidis, sp., Kunth ... ... vi. 619
Isolepis, Br. ... ... vi. 654
  ambigua, Zoll. ... ... ,, 656
  angularis, R. & S. ... ... ,, 644
  articulata, Nees ... ... ,, 656
  barbata, Br. ... ... ,, 651
  bispicata, R. & S. ... ... ,, 634
  capillaris, D. Don ... ... ,, 652
  cochleata, Steud. ... ... ,, 632
  complanata, R. & S. ... ... ,, 646
  coronaria, R. & S. ... ... ,, 619
  corymbosa, R. & S. ... ... ,, 657
  Cumingii, Steud. ... ... ,, 652
  curvata, Zoll. ... ... ,, 653
  curvifolia, Schrad. .. ... ,, 636
  curvula, Kunth ... . ,, 653
  densa, R. & S. ... ... ,, 652
  dipsacea, R. & S. ... ... ,, 635
  dura, Moritz. ... . ,, 643
  echinulata, Kunth ... . . ,, 606
  elachista, R. & S. ... ... ,, 635
  falcata, R. & S. ... ... ,, 647
  fluitans, Br. ... ... ,, 653
  globulosa, R. & S. ... ... ,, 645
  gracilis, Nees ... ... ,, 653
  inclinata, Barb. ... ... ,, 657
  incurvata, Nees... ... ... ,, 656
  involucellata, Steud. ... ,, 652

Isolepis Vol. Page
kyllingioides, A. Rich. ... vi. 662
longispica, Steud. ... ... „ 649
lupulina, Nees ... ... „ 657
maxima, Dietr. ... ... „ 660
Micheliana, R. & S. ... ... „ 662
miliacea, Presl ... ... „ 644
monostachya, Spreng. ... „ 634
oligantha, C. A. Meyer ... „ 654
oryzetorum, Steud. ... ... „ 656
? *pentagona*, R. & S. ... „ 644
prolongata, Nees ... ... „ 656
puberula, Steud. ... ... „ 653
pubescens, R. & S. ... ... „ 665
pumila, R. & S. ... ... „ 654
rariflora, Schrad. ... ... „ 634
Roylei, Nees ... ... „ 657
setacea, Br. ... ... „ 654
squarrosa, R. & S. ... ... „ 663
subtristachya, Hochst. ... „ 652
supina, Br. ... ... „ 655
tenuissima, D. Don ... ... „ 652
? *tetragona*, R. & S. ... ... „ 644
trichokolea, Steud. ... ... „ 652
trifida, Nees ... . „ 652
uncinata, R. & S. ... ... „ 666
uninodis, Delile... ... ... „ 656
verrucifera, Max. ... ... „ 635
Wallichiana, R. & S. ... „ 651
Willdenowii, R. & S. ... „ 646
sp., Wall. ... vi. 398, 596, 605, 627, ? 628, 629, ? 631, 632, 633, 634, 635, 637, 640, 641, 649, 652, 657, 662, 663
Isolobus campanuloides, A. DC. iii. 425
radicans, A. DC. ... ... „ 425
Roxburghianus, A. DC. ... „ 425
Isonandra, *Wight* ... ... iii. 538
acuminata, Drury ... ... „ 542
? *caloneura*, Kurz ... ... „ 546
calophylla, Kurz ... ... „ 546
canaliculata, Thw. ... ... „ 541
Candolliana, *Wight*... ... „ 539
diplostemon, *Clarke*... ... „ 540
grandis, Thw. ... ... „ 540
Gutta, Hook. ... ... „ 543
hexandra, Griff. ... ... „ 543
lævifolia, Thw. ... ... „ 541
lanceolata, *Wight* ... ... „ 539
lanceolata, Thw. ... ... „ 541
obovata, Griff. ... ... „ 542
pauciflora, Thw. ... ... „ 541
Perrottetiana, *Wight* ... „ 539
Perrottetiana, A. DC. ... „ 539
polyandra, Wight ... ... „ 548
polyantha, Kurz ... ... „ 542
rubiginosa, Thw. ... .. „ 541
Stocksii, *Clarke*... ... ... „ 539

Isonandra Vol. Page
villosa, *Wight* ... ... iii. 538
Wightiana, *A. DC.* ... ... „ 539
Isonema ovata, Cass. ... ... iii. 235
Isopteris penangiana, Wall. ... i. 208
Isopyrum, *Linn.* ... ... i. 23
adiantifolium, *Hk. f. & T.* „ 23
anemonoides, Kar. & Kir. „ 23
grandiflorum, *Fisch.* .. „ 23
microphyllum, Royle ... „ 23
thalictroides, *Linn.* ... „ 23
Itaber, Koempf. .. .. v. 532
Itea, *Linn.* ... ... ii. 407
chinensis, *Hk. & Arn.* ... „ 408
fragrans, Wall. ... ... „ 409
macrophylla, *Wall.* ... ... „ 408
nutans, *Royle* ... ... „ 408
Ixeris, Cass. ... ... iii. 410
fontinalis, DC. ... ... „ 410
polycephala, Cass. ... ... „ 410
Ixia chinensis, Linn. ... ... vi. 277
IXONANTHEÆ ... ... i. 410
Ixonanthes, *Jack* ... ... i. 416
cuneata, *Miq.* ... ... „ 416
dodecandra, Griff. ... ... „ 416
icosandra, *Jack* ... ... „ 416
khasiana, *Hk. f.* ... ... „ 416
obovata, *Hk. f.* ... ... „ 417
reticulata, *Jack*... ... ... „ 417
Ixora, *Linn.* ... ... iii. 137
acuminata, *Roxb.* .. ... „ 137
acuminata, Thw. ... ... „ 138
acutiflora, Reinw. ... ... „ 149
affinis, Wall. ... ... „ 149
alba, Roxb. ... ... „ 145
amœna, *Wall.* ... ... „ 146
arborea, Roxb. ... ... „ 142
arborescens, Hassk. ... ... „ 143
? *arguta*, Br. ... ... „ 149
Arnottiana, Miq. ... ... „ 142
attenuata, Wall. ... iii. 149, 177
Bandhuca, Roxb. .. ... iii. 145
barbata, *Roxb.* ... ... „ 148
blanda, Ker ... ... „ 145
brachiata, *Roxb.* ... ... „ 142
Brandisiana, *Kurz* ... ... „ 142
brunnescens, *Kurz* ... ... „ 143
Brunonis, *Wall.* ... ... „ 139
calycina, *Thw.* ... ... „ 138
Canjia, Wall. ... ... „ 147
coccinea, *Linn.* ... ... „ 145
coccinea, Curt. ... ... „ 145
concinna, *Br.* ... ... „ 147
congesta, *Roxb.* ... ... „ 146
coriacea, Br. ... ... „ 143
corymbosa, Heyne ... ... „ 140
crocata, Lindl. ... ... „ 145
cuneifolia, *Roxb.* ... iii. 144, 149

Ixora Vol. Page
decipiens, DC. ... ... iii. 142
? *densa*, Br. ... . „ 149
diversifolia, *Wall.* ... ... „ 141
elliptica, Br. ... ... „ 143
elongata, *Heyne* ... ... „ 141
erubescens, *Wall.* ... ... „ 149
fulgens, *Roxb.* ... ... „ 146
fulgens, Wall. ... ... „ 146
glaucina, *Kurz* ... ... „ 149
grandiflora, Br. ... ... „ 145
grandiflora, Schlecht. ... „ 139
grandifolia, *Zoll. & Mor.* „ 143
grandifolia, Br. ... ... „ 105
grandis, Miq. ... ... „ 140
Griffithii, Hook. ... ... „ 146
Helferi, Kurz ... ... „ 107
incarnata, DC. ... ... „ 145
incarnata, Roxb. ... ... „ 145
Johnsoni, *Hk. f.* ... ... „ 139
jucunda, *Thw.* ... ... „ 144
Kingstoni, *Hk. f.* ... ... „ 140
Kurzeana, Teysm & Binn. „ 143
lanceolaria, *Colebr.* ... ... „ 138
laxiflora, Hassk. ... ... „ 149
leucantha, Heyne ... ... „ 138
longifolia, G. Don ... ... „ 105
lucida, *Br.* ... ... „ 148
macrophylla, Br. ... ... „ 105
macrosiphon, Kurz ... ... „ 143
memecylifolia, Kurz... ... „ 149
merguensis, *Hk. f.* ... ... „ 140
montana, Miq. ... ... „ 40
naucleiflora, Kurz ... ... „ 152
nigricans, *Br.* ... ... „ 148
Notoniana, *Wall.* ... ... „ 139
oblonga, *Br.* ... ... „ 148
oblonga, Br. ... ... „ 149
obovata, Heyne... ... ... „ 145
obtusata, Miq. ... ... „ 142
opaca, *Br.* ... ... „ 147
oxyphylla, Wall. ... ... „ 139
paniculata, *Rottl.* ... ... „ 149
paniculata, Lamk. ... ... „ 150
parviflora, *Vahl* ... ... „ 142
Pavetta, Andr. ... ... „ 142
Pavetta, Roxb. ... ... „ 150
pendula, *Jack* ... ... „ 141
pedunculata, Dalz. ... ... „ 141
polyantha, *Wight* ... ... „ 140
propinqua, Br. ... ... „ 145
puberula, Wall. ... ... „ 144
recurva, Kurz ... ... „ 197
rosea, Wall. ... ... iii. 144, 145
rosella, Kurz ... ... iii. 143
rugosula, *Wall.* ... ... „ 146
salicifolia, DC. ... ... „ 146
? *sessiliflora*, Kurz ... ... „ 147

Ixora Vol. Page
spectabilis, *Wall.* ... ... iii. 141
stricta, *Roxb.* ... ... „ 145
subcapitata, Wall. ... ... „ 151
subsessilis, *Wall.* ... ... „ 139
subulata, Teysm. & Binn „ 149
Thozetia, F. Muell. ... ... „ 112
Thwaitesii, *Hk. f.* ... ... „ 138
tomentosa, DC. ... ... „ 150
tomentosa, Roxb. ... ... „ 150
tomentosa, Thw. ... ... „ 153
undulata, *Roxb.* ... ... „ 147
villosa, *Roxb.* ... ... „ 144
Wallichii, W. & A. ... ... „ 149
Wallichii, Wight ... ... „ 138
weberæfolia, Kurz ... ... „ 105
Wightiana, Wall. ... ... „ 139
IXOREÆ ... ... iii. 20, 137

Jackia, *Wall.* ... ... iii. 125
ornata, *Wall.* ... ... „ 126
Jaegeria (lapsu *Joegeria*)
calendulacea, Spreng. ... iii. 306
Jaeschkea, *Kurz* ... ... iv. 119
gentianoides, *Kurz* ... ... „ 119
latisepala, *Clarke* ... ... „ 119
microsperma, *Clarke* ... „ 119
Jambolifera pedunculata,
Gaertn. ... ... ii. 500
pedunculata, Vahl ... ... i. 498
Jambosa acuminatissima,
Hassk. ... ... ii. 483
æmula, Bl. ... ... „ 472
alba, Rumph. ... ... „ 474
amplexicaulis, DC. ... ... „ 471
aquea, DC. ... ... „ 473
bifaria, Miq. ... ... „ 478
bracteata, Miq. ... ... „ 485
coarctata, Bl. ... ... „ 474
conferta, Korth. ... ... „ 480
cylindrica, Thw. ... ... „ 480
densiflora, Korth. ... ... „ 473
domestica, Rumph. ... ... „ 471
firma, Bl. ... ... „ 476
formosa, Walp. ... ... „ 471
glabrata, DC. ... ... „ 480
grandis, Bl. ... ... „ 476
inophylla, Miq. ... ... „ 481
læta, Bl. ... ... „ 479
laurifolia, DC. ... ... „ 478
lineata, DC. ... ... „ 487
macrocarpa, Miq. ... ... „ 474
macrophylla, DC. ... .. „ 475
madagascariensis, Bl. ... „ 473
malaccensis, DC. ... ... „ 471
mappacea, Korth. ... ... „ 471
media, Korth. ... ... „ 472
nigra, Rumph. ... ... „ 472

Jambosa Vol. Page
pauciflora, Dalz. & Gibs.... ii. 479
pulchella, Miq. ... „ 492
purpurascens, DC. ... „ 471
purpurea, Wall. ... „ 472
rubricaulis, Miq. ... „ 487
samarangensis, DC. ... „ 474
sylvestris alba, Rumph. ... „ 471
tenuicuspis, Miq. ... „ 482
tetraëdra, Miq. ... „ 476
Teysmanni, Miq. ... „ 480
vulgaris, DC. ... „ 474
urceolata, Korth. ... „ 476
Wightiana, Bl. ... „ 482
Jardinea abyssinica, Steud. ... ii. 148
JASMINEÆ ... iii. 590
Jasminum, *Linn.* ... iii. 591
acuminatum, Heyne... „ 601
adenophyllum, *Wall.* ... „ 597
affine, Wight ... „ 600
amplexicaule, Wall. ... „ 592
anastomosans, *Wall.* ... „ 596
angustifolium, *Vahl* ... „ 598
angustifolium, Ker ... „ 597
angustifolium, Wall. ... „ 597
arborescens, *Roxb.* ... „ 594
arboreum, R. & S. ... „ 594
aristatum, Wall. ... „ 592
attenuatum, *Roxb.* ... „ 599
attenuatum, Wall. ... „ 601
aureum, D. Don ... „ 603
auriculatum, *Vahl* ... „ 600
azoricum, Heyne ... „ 601
bifarium, *Wall.* ... „ 595
bignoniaceum, Wall. ... „ 602
bracteatum, Heyne ... „ 593
bracteatum, Roxb. ... „ 593
bracteatum, Wall. ... „ 595
bracteatum, Wight ... „ 592
brevilobum, *A. DC.* ... „ 600
calophyllum, *Wall.* ... „ 602
caudatum, *Wall.* ... „ 601
chrysanthemum, Roxb. ... „ 602
coarctatum, *Roxb.* ... „ 593
congestum, Wall. ... „ 592
cordifolium, *Wall.* ... „ 596
courtallense, Wight ... „ 602
crassifolium, Bl. ... „ 600
cuspidatum, Rottl. ... „ 598
decussatum, *Wall.* ... „ 596
dichotomum, D. Don ... „ 599
dispermum, *Wall.* ... „ 602
erectiflorum, A. DC. ... „ 596
extensum, Wall. ... „ 603
flexile, *Vahl* ... „ 601
fragrans, Salisb. ... „ 591
Gardnerianum, Wight .. „ 599
glabellum, Wall. ... iii. 594, 595

Jasminum Vol. Page
glabrum, Horsf. ... iii. 595
glabrum, Willd. ... „ 595
glandulosum, *Wall.* ... „ 599
grandiflorum, *Linn.* ... „ 603
Griffithii, *Clarke* ... „ 593
Hamiltonii, G. Don ... „ 599
heterophyllum, *Roxb.* ... „ 601
Heyneanum, Wall. ... „ 592
hirsutum, Miq. ... „ 593
hirsutum, Wall. ... „ 593
hirsutum, Willd. ... iii. 126, 592
humile, *Linn.* ... iii. 602
inodorum, Jacq. ... „ 602
intermedium, Wight ... „ 599
lætum, Wall. ... „ 595
lanceifolium, Roxb. ... „ 601
lanceolaria, *Roxb.* ... „ 601
latifolia, Roxb. ... „ 594
latipetalum, *Clarke* ... „ 599
laurifolium, *Roxb.* ... „ 597
laurifolium, Gamble ... „ 599
laurifolium, Wall. ... „ 596
Lessertianum, DC. ... „ 595
ligustrifolium, Wall. iii. 598, 603
Maingayi, *Clarke* ... iii. 594
malabaricum, *Wight* ... „ 594
mauritianum, Bojer ... „ 600
montanum, Roth ... „ 594
multiflorum, Roth ... „ 592
myrtophyllum, Zenk. ... , 598
nepalense, Spreng. ... „ 599
nilagiricum, Hohen. ... „ 600
nobile, *Clarke* ... „ 597
nummularoides, Bl. ... „ 595
oblongum, Burm. ... „ 603
officinale, *Linn.* ... „ 603
ovalifolium, Wight ... „ 600
ovatum, Wall. ... „ 601
paniculatum, Roxb. ... „ 601
parviflorum, Dcne. ... „ 601
Perrottetianum, DC. ... „ 598
pubescens, *Willd.* ... „ 592
pubescens, Miq. ... „ 593
pubescens, Wall. ... „ 591
pubigerum, *D. Don.* ... „ 602
punctatum, Wall. ... „ 595
purpureum, Heyne ... „ 598
quinqueflorum, Heyne ... „ 591
reticulatum, Wall. ... „ 593
revolutum, Sims ... „ 602
rigidum, *Zenk.* ... „ 598
rigidum, Thw. ... „ 593
Ritchiei, *Clarke* ... „ 598
Rottlerianum, *Wall.* ... „ 593
Roxburghianum, *Wall.* ... „ 595
Sambac, *Ait.* ... „ 591
scandens, *Vahl* ... „ 595

Jasminum Vol. Page
scandens, Griff. ... iii. 592
sessiliflorum, *Vahl* ... ,, 597
silhetense, Bl. ... ,, 596
simplicifolium, Benth. ... ,, 599
smilacifolium, *Griff.* ... ,, 600
solenanthum, DC. ... ,, 603
stenopetalum, Lindl. ... ,, 596
subglandulosum, *Kurz* ... ,, 600
subtriplinerve, *Bl.* ... ,, 596
syringæfolium, *Wall.* ... ,, 595
tetraphis, Wt. & Gardn. ... ,, 599
travancorense, Heyne ... ,, 601
trichotomum, *Heyne* ... ,, 599
triflorum, Heyne ... ,, 598
triflorum, Pers. ... ,, 598
trinerve, Roxb. ... ,, 596
trinerve, Vahl ... ,, 596
trinerve, Wall. ... ,, 596
tubiflorum, Roxb. ... ,, 603
undulatum, *Ker* ... ,, 592
undulatum, Heyne ... ,, 592
undulatum, Willd. ... ,, 591
vimineum, Willd. ... ,, 598
Wallichianum, Lindl. ... ,, 602
Wightii, *Clarke* ... ,, 598
Zambac, Roxb. ... ,, 591
zeylanicum, Burm. ... ,, 647
sp., Griff. ... ,, 592
sp., Hardwicke ... ,, 602
sp., Hk. f. & T. iii. 592, 593, 596, 597, 601
Jatropha, *Linn.* ... v. 382
Curcas, *Linn.* ... ,, 383
Curcas, Wall. ... ,, 383
glandulifera, *Roxb.* ... ,, 382
glauca, Vahl ... ,, 382
gossypifolia, *Linn.* ... ,, 383
heterophylla, *Heyne* ... ,, 382
moluccana, Linn. ... ,, 385
moluccana, Hb. Russ. ... ,, 383
montana, Willd. ... ,, 462
multifida, *Linn.* ... ,, 383
nana, *Dalz. & Gibs.* ... ,, 382
peltata, Wight ... ,, 383
Wightiana, *Muell.* ... ,, 383
Jenkinsia assamica, Griff. ... i. 593
cristata, Wall. ... iv. 11
Jerdonia, *Wight* ... iv. 367
indica, *Wight* ... ,, 368
Jocaste albiflora, Kunth ... vi. 323
purpurea, Kunth ... ,, 323
Joegeria, vide *Jaegeria* ... iii. 306
Johnia, Roxb. ... i. 626
coromandeliana, Roxb. ... ,, 626
salacioides, Roxb. ... ,, 627
Johnia, Wt. & Arn. ... ii. 183
congesta, Dalz. & Gibs. ... ,, 210

Johnia Vol. Page
Wightii, W. & A. ... ii. 183
Johrenia alpina, Fenzl ... ii. 665
Jonesia Asoca, Roxb. ... ii. 271
pinnata, Willd. ... ,, 271
scandens, Roxb. ... ,, 272
triandra, Roxb. ... ,, 272
Josephia, *Wight* ... v. 823, vi. 178
lanceolata, *Wight* ... v. 823
latifolia, *Wight* ... ,, 823
Jossinia indica, Wight . ii. 500
lucida, DC. ... ,, 501
JUGLANDEÆ ... v. 594
Juglans, *Linn.* ... v. 595
? *arguta*, Wall. ... ,, 595
Catappa, Lour. ... ii. 444
pterococca, Roxb. ... v. 595, 596
regia, *Linn.* ... v. 595
villosa, Wall. ... ,, 596
Julostyles, *Thw.* ... i. 333
angustifolia, *Thw.* ... ,, 333
JUNCACEÆ ... vi. 392
Juncellus, *Kunth* ... vi. 594
alopecuroides, *Clarke* ... ,, 595
inundatus, *Clarke* ... ,, 595
lævigatus, *Clarke* ... ,, 596
Monti, Rottb. ... ,, 610
pygmæus, *Clarke* ... ,, 596
serotinus, *Clarke* ... ,, 594
stylosus, *Clarke* ... ,, 595
Juncus, *Linn.* ... vi. 392
articulatus, Linn. ... ,, 395
benghalensis, Kunth ... ,, 398
bracteatus, *Buchen.* ... ,, 397
bufonius, *Linn.* ... ,, 392
campestris, Linn. ... ,, 401
castaneus, Hk. f. & T. ... ,, 398
chrysocarpus, *Buchen.* ... ,, 394
Clarkei, *Buchen.* ... ,, 400
communis, E. Mey. ... ,, 392
compressus, *Jacq.* ... ,, 393
concinnus, *D. Don* ... ,, 399
concinnus, Hk. f. & T. ... ,, 398
effusus, *Linn.* ... ,, 392
effusus, Steud. ... ,, 393
elegans, Royle ... ,, 399
filiformis, Linn. ... ,, 394
Gerardi, Loisel. ... ,, 394
glaucus, *Ehrh.* ... ,, 393
Grisebachii, *Buchen.* ... ,, 394
himalensis, *Klotz. & Garcke* ,, 398
Hoffmeisteri, Klotz. ... ,, 398
indicus, Royle ... ,, 396
khasiensis, *Buchen.* ... ,, 399
lampocarpus, *Ehrh.* ... ,, 395
leptospermus, *Buchen.* ... ,, 396
Leschenaultii, J. Gay ... ,, 395
leucanthus, *Royle* ... ,, 397

Juncus Vol. Page
leucomelas, *Royle* ... ... vi. 397
maritimus, *Lamk.* ... ... „ 393
membranaceus, *Royle* ... „ 397
minimus, *Buchen.* ... ... „ 400
monticola, Steud. ... ... „ 396
nematocaulon, *Hk. f.* ... „ 400
ochraceus, *Buchen* ... ... „ 394
plumosus, Wall. ... ... „ 401
prismatocarpus, *Br.* ... „ 395
punctorius, *Linn. f.* ... .. „ 395
scirpoides, Jacq. ... ... „ 398
sikkimensis, *Hk. f.* ... ... „ 399
sinensis, J. Gay ... ... „ 396
sphacelatus, *Dcne.* ... ... „ 398
sphenostemon, Buchen. ... „ 398
tenuis, *Willd.* ... ... „ 393
Thomsoni, Buchen. ... ... „ 397
triglumis, *Linn.* ... ... „ 396
unibracteatus, Griff. ... „ 396
Wallichianus, La Harpe ... „ 396
zebrinus, Gard. Chron. ... „ 658
sp., Wall. ... ... vi. 396, 398, 399
Juniperus, *Linn.* ... ... v. 646
communis, *Linn.* .. ... „ 646
densa, Gord. ... ... „ 647
elata, Roxb. ... ... „ 649
excelsa, Bieb. ... ... „ 647
excelsa, Brand. ... ... „ 647
excelsa, Wall. ... ... „ 646
gossainthaneana, Lodd. ... „ 647
indica, Bertol. ... ... „ 646
Lambertiana, Wall. ... ... „ 647
macropoda, *Boiss.* ... ... „ 647
nana, Willd. ... ... „ 646
Phillippsiana, Wall. ... „ 649
Pseudo-sabina, *Fisch. & Mey.* ... ... „ 646
recurva, *Ham.* ... ... „ 647
religiosa, Royle ... ... „ 647
rigida, Wall. ... ... v. 647, 649
? *Sabina*, Hk. f. & T. ... v. 646
squamata, Ham. ... ... „ 647
squamosa, Ham. ... ... „ 647
Wallichiana, Hk. f. & T. „ 646
Jurinea, *Cass.* ... ... iii. 378
adenocarpa, Ledeb. ... ... „ 372
ceratocarpa, *Benth.* ... ... „ 378
chætolepis, Boiss. ... ... „ 382
gnaphalioides, *Klatt* ... „ 379
macrocephala, *Benth.* ... „ 378
modesta, *Boiss.* ... ... „ 378
rosulata, *Klatt* ... ... „ 379
? *Tricholepis*, DC. ... ... „ 383
Jussiæa, *Linn.* ... ... ii. 587
angustifolia, Lamk. ... ... „ 587
Burmanni, DC. ... ... „ 587
decumbens, Wall. ... ... „ 587
Jussiæa Vol. Page
diffusa, Forsk. ... ... ii. 587
exaltata, Roxb. ... ... „ 587
floribunda, Griff. ... ... „ 587
fluviatilis, Bl. ... . „ 587
fruticosa, DC. ... ... „ 587
longipes, Griff. ... ... „ 587
octofila (*octophila*), DC. ... „ 587
repens, *Linn.* ... ... „ 587
scabra, Willd. ... ... „ 587
suffruticosa, *Linn.* ... ... „ 587
Swartziana, DC. ... ... „ 587
villosa, Lamk. ... ... „ 587
Justicia, *Linn.* ... ... iv. 524
acaulis, Linn. f. ... ... „ 394
acuminata, Wall. ... iv. 555, 556
Adhatoda, Linn. ... ... iv. 540
alata, Vahl ... . „ 503
alba, Roxb. ... ... „ 498
andrographioides, *Clarke* ... „ 534
argyrostachya, *T. Anders.* „ 527
aristata, Wall. .. .. „ 524
asperula, Lodd. ... ... „ 512
assamica, *Clarke* ... ... „ 537
Atkinsoni, *T. Anders.* ... „ 528
bengalensis, Spreng. ... „ 395
Betonica, *Linn.* ... ... „ 525
Betonica, T. Anders. ... „ 526
bicalyculata, Vahl ... ... „ 554
biflora, *Vahl* ... ... „ 539
bivalvis, Linn. ... ... „ 552
bivalvis, Roxb. ... ... „ 525
boerhaaviæfolia, *T. Anders.* „ 535
brachiides, Roth ... ... „ 529
brachionoides, Spreng. ... „ 529
Brandisii, *T. Anders.* ... „ 531
brunelloides, Lamk. ... ... „ 395
burmanica, *Clarke* ... ... „ 527
calcarata, Wall.... ... ... „ 541
caloneura, *Kurz* ... ... „ 529
canescens, Lamk. ... iv. 395, 409
canescens, Wall. ... ... iv. 554
Careyana, Wall. ... .. „ 535
ceylanica, *T. Anders.* ... „ 529
chinensis, Vahl ... ... „ 551
chinensis, Wall.... iv. 553, 554, 557
collina, T. Anders. ... ... iv. 543
conspicua, Wall. ... ... „ 489
cordifolia, Wall. ... ... „ 502
curviflora, Wall. ... ... „ 511
dasycarpa, *Kurz* ... ... „ 528
decussata, *Roxb.* ... ... „ 532
dentata, Klein ... ... „ 545
dichotoma, Bl. ... ... „ 543
dichotoma, Rottl. ... ... „ 541
diffusa, *Willd.* ... ... „ 538
Ecbolium, Linn. ... ... „ 544
echioides, Linn. ... ... „ 505

Justicia Vol. Page
Edgeworthii, T. Anders. ... iv. 536
elongata, Vahl ... ,, 502
emarginata, Nees ... ,, 544
fastigiata, Lamk. ... ,, 421
flaccida, *Kurz* ... ,, 533
flagelliformis, *Clarke* ... ,, 535
flava, *Kurz* ... ,, 531
fragilis, *Wall.* ... ,, 528
fulgida, Bl. ... ,, 524
gangetica, Linn. ... ,, 493
Gendarussa, *Linn. f.* ... ,, 532
glabra, *Koen.* ... ,, 535
glandulosa, *Wall.* ... ,, 505
glandulosa, Roth ... ,, 506
glauca, *Rottl.* ... ,, 529
graciliflora, Wall. ... ,, 500
gracilis, T. Anders. ... ,, 548
grandifolia, *T. Anders.* ... ,, 528
Griffithii, T. Anders. ... ,, 543
grossa, *Clarke* ... ,, 535
guttata, Wall. ... iv. 512, 513
hedyotidifolia, Wall. ... iv. 538
Helferi, *Clarke* ... ,, 533
heterocarpa, *T. Anders.* ... ,, 531
hirsuta, Vahl ... ,, 395
hirtella, Wall. ... ,, 539
Hookeriana, *T. Anders.* ... ,, 532
inconspicua, Wall. ... ,, 525
infracta, Vahl ... ,, 550
infundibuliformis, Linn. ... ,, 492
khasiana, *Clarke* ... ,, 537
Kurzii, *Clarke* ... ,, 527
lætevirens, Vahl ... ,, 545
lamifolia, Koen. ... ,, 395
lanceolaria, Roxb. ... ,, 555
? *latebrosa*, Koen. ... ,, 551
latebrosa, Roxb. ... ,, 551
latifolia, Vahl ... ,, 497
ligulata, Lamk. ... ,, 554
ligustrina, Vahl ... ,, 544
lineata, Wall. ... iv. 504, 505, 533
linifolia, Wall. ... iv. 548
livida, Nees ... ,, 545
lobelioides, Wall. ... ,, 505
longifolia, Wall. ... ,, 525
madurensis, Burm. ... ,, 410
Maingayi, *Clarke* ... ,, 534
micrantha, *Wall.* ... iv. 536, 539
mollissima, Wall. ... iv. 539
montana, *Wall.* ... ,, 525
montana, Roxb. ... ,, 421
Moretiana, *Vahl* ... ,, 540
nasuta, Linn. ... ,, 541
Neesiana, *Wall.* ... ,, 531
neilgherrensis, T. Anders. ,, 526
nervosa, Vahl ... ,, 418
nilgherrensis, *Wall.* ... ,, 526

Justicia Vol. Page
notha, *Clarke* ... iv. 537
nummularifolia, Wall. ... ,, 506
nutans, Burm. ... ,, 524
ochroleuca, Bl. ... ,, 525
orbiculata, T. Anders. ... ,, 539
orbiculata, Wall. ... iv. 498, 538
orchioides, Griff. ... iv. 544
oreophila, *Clarke* ... ,, 526
orixensis, Roxb. ... ,, 529
palatifera, Wall. ... ,, 498
paniculata, Burm. ... ,, 501
parviflora, Retz. ... ,, 550
pectinata, Linn. ... ,, 550
peploides, T. Anders. ... ,, 537
picta, Linn. ... ,, 545
plumbaginea, Wall. ... ,, 493
polysperma, Roxb. ... ,, 460
procumbens, *Linn.* ... ,, 539
procumbens, Linn. ... iv. 536, 538
procumbens, Wall. ... iv. 537, 539
Pseudo-Betonica, Roth ... iv. 525
ptychostoma, *Wall.* ... ,, 534
ptychostoma, Nees ... ,, 534
pubescens, Lamk. ... ,, 409
pubigera, *Wall.* ... ,, 536
pulchella. Roxb. ... ,, 420
punduana, *Wall.* ... ,, 527
purpurea, Wall. ... ,, 557
quadrangularis, Wall. ... ,, 512
quadrifaria, *Wall.* ... ,, 530
quadrifaria, T. Anders. ... ,, 530
quinqueangularis, *Kœn.* ,, 536
quinqueangularis, Wall. ... ,, 538
ramosissima, Roxb. ... ,, 525
repens, Linn. ... ,, 549
repens, Wall. ... ,, 549
retorta, Vahl ... ,, 551
rosea, Vahl ... ,, 419
Rottleriana, Wall. ... ,, 541
rotundifolia, Nees ... ,, 545
Roxburghiana, R. & S. ... ,, 556
Royeniana, *Clarke* ... ,, 537
rubicunda, Ham. ... ,, 498
salicifolia, *T. Anders.* ... ,, 531
salsoloides, *T. Anders.* ... ,, 530
sanguinolenta, Vahl ... ,, 510
scandens, Vahl ... ,, 541
serpyllifolia, Vahl ... ,, 506
serrulata, Wall. ... ,, 509
simplex, *D. Don* ... ,, 539
speciosa, Roxb. ... ,, 556
stricta, Vahl ... ,, 409
sylvestris, Wall. ... ,, 556
thyrsiflora, Roxb. ... ,, 512
tinctoria, Roxb. ... ,, 556
tomentosa, Roxb. ... ,, 395
tomentosa, Wall. ... ,, 395

Justicia ... Vol. Page
tranquebariensis, *Linn. f.* ... iv. 530
tranquebariensis, Roxb. ... „ 529
trinervia, *Vahl* ... „ 526
tubiflora, Wall. ... „ 511
umbellata, Wall. ... „ 552
undulata, Vahl ... „ 555
Vahliana, R. & S. ... „ 538
Vahlii, Roth ... „ 538
vasculosa, *Wall.* ... „ 533
ventricosa, *Wall.* ... „ 526
venusta, Wall. ... „ 508
verticillata, Roxb. ... „ 506
virgata, T. Anders. ... „ 542
vitellina, Roxb. ... „ 512
Wallichii, T. Anders. ... „ 542
Wightiana, Wall. ... „ 546
wynaadensis, *Wall.* ... „ 533
Zollingeriana, *Clarke* ... „ 530
sp., Benth. ... „ 547
sp., Griff. ... iv. 497, 528
JUSTICIEÆ ... iv. 389

Kadsura, *Kæmpfer* ... i. 45
grandiflora, Wall. ... „ 44
japonica, Wall. ... „ 45
propinqua, Wall. ... „ 45
Roxburghiana, *Arn.* ... „ 45
scandens, Bl. ... „ 45
Wightiana, *Arn.* ... „ 45
Kæmpferia, *Linn.* ... vi. 218
Andersoni, *Baker* ... „ 221
angustifolia, *Rosc.* ... „ 219
candida, *Wall.* ... „ 222
concinna, *Baker* ... „ 221
Crawfurdii, Wall. ... „ 222
diversifolia, Link ... „ 220
elegans, *Wall.* ... „ 222
Galanga, *Linn.* ... „ 219
Galanga, Willd. ... „ 219
humilis, Salisb. ... „ 219
involucrata, *King* ... „ 221
linearis, *Wall.* ... „ 223
longa, Jacq. ... „ 222
macrochlamys, *Baker* „ 223
marginata, *Carey* ... „ 219
ovalifolia, *Roxb.* ... „ 219
ovata, Roxb. ... „ 220
pandurata, *Roxb.* ... „ 220
Parishii, Hk. f. ... „ 220
parviflora, *Wall.* ... „ 221
parvula, *King* ... „ 223
plantaginifolia, Salisb. ... „ 219
Prainiana, *King* ... „ 220
Roscoeana, *Wall.* ... „ 220
Roscoei, Wall. ... „ 221
rotunda, *Linn.* ... „ 222
Roxburghiana, Schult. ... „ 219

Kæmpferia ... Vol. Page
scaposa, *Benth.* ... vi. 224
secunda, *Wall.* ... „ 223
sessilis, Kœn. ... „ 219
sikkimensis, *King* ... „ 223
siphonantha, *King* ... „ 222
speciosa, *Baker* ... „ 220
undulata, Link ... „ 219
versicolor, Salisb. ... „ 222
Kalanchoe, *Adans.* ... ii. 414
acutiflora, Haw. ... „ 416
acutiflora, Kurz ... „ 414
ægyptiaca, DC. ... „ 414
brasiliensis, *Camb.* (see *Err.*) „ 415
crenata, Oliv. ... ii. 414, 415
floribunda, *W. & A.* ... ii. 414
floribunda, Thw. ... „ 415
glandulosa, *Hochst.* ... „ 414
grandiflora, *W. & A.* ... „ 415
heterophylla, Hb. Wight ... „ 414
laciniata, *DC.* ... „ 415
nudicaulis, Ham. ... „ 414
olivacea, Dalz. (see *Errata*)
pinnata, Pers. ... „ 413
Ritchieana, Dalz. ... „ 414
spathulata, *DC.* ... „ 414
spathulata, Wall. ... „ 415
teretifolia, Haw. ... „ 415
teretifolia, Wall. ... „ 416
varians, Haw. ... „ 414
Wightiana, Wall. ... „ 415
Kandelia, *W. & A.* ... ii. 437
Rheedii, *W. & A.* ... „ 437
Kanilia caryophylloides, Bl. ii. 438
parviflora, Bl. ... „ 438
Karivia javanica, Miq. ... ii. 623
Rheedii, Roem. ... „ 625
samoensis, A. Gray ... „ 624
umbellata, Arn. ... „ 625
Katou Indel, Ham. ... vi. 425
Kayea, *Wall.* ... i. 276
cuspidata, Pl. & Tr. ... „ 277
floribunda, *Wall.* ... „ 276
nervosa, *T. Anders.* ... „ 277
racemosa, *Pl. & Tr.* ... „ 276
stylosa, *Thw.* ... „ 276
Keenania, *Hk. f.* ... iii. 101
modesta, *Hk. f.* ... „ 101
Kendrickia, *Hk. f.* ... ii. 526
Walkeri, *Hk. f.* ... „ 526
Kentia, Steud. ... iv. 84
morindæfolia, Steud. ... „ 84
Kentia, Bl. ... vi. 411
paradoxa, Mart. ... „ 411
Kentrophyllum lanatum, DC. iii. 386
Keppleria sp. Mart. ... vi. 418
Keratephorus Leerii, Hassk. iii. 534
Wightii, Hassk. ... „ 548

Keratephorus Vol. Page
Wightii, Maingay ... iii. 547
Keyserlingia, Bunge ... ii. 251
Kibara, *Endl.* ... v. 114
Blumei, Steud. ... „ 114
coriacea, *Endl.* ... „ 114
Kibessia, *DC.* ... ii. 552
acuminata. *Dcne.* ... „ 552
cupularis, Dcne. ... „ 552
pubescens, *Dcne.* ... „ 552
simplex, *Korth.* ... „ 552
tuberculata, *Hk. f.* „ 553
Kiesera sericea, Reinw. ii. 111
Kingstonia, *Hk. f. & T.* ... i. 93
nervosa, *Hk. f. & T.* ... „ 93
Kirganelia dubia, Baill. ... v. 288
eglandulosa, Baill. ... „ 288
intermedia, Baill. ... „ 288
multiflora, Baill. ... „ 288
multiflora, Thw. ... „ 288
Prieuriana, Baill. ... „ 288
puberula, Baill. ... „ 288
reticulata, Baill. ... „ 288
sinensis, Baill. ... „ 288
Wightiana, Baill. ... „ 288
Kittleocharis trigyna, Alef. i. 412
Kleinhovia, *Linn.* ... i. 364
Hospita, *Linn.* ... „ 364
Kleinia Cusimbua, Less. ... iii. 334
Klugia, *Schlecht* ... iv. 366
ampliata, *Clarke* ... „ 367
glabra, Gardn. ... „ 366
Notoniana, *A. DC.* ... „ 366
Notoniana, Hook. ... „ 367
scabra, Dalz. & Gibs. ... „ 366
zeylanica, *Gardn.* ... „ 367
? *Knema ? corticosa*, Lour. ... v. 111
? glaucescens, Jack ... „ 111
glaucescens, Wall. ... „ 113
Knoxia, *Linn.* ... iii. 128
brachycarpa, *Br.* ... „ 130
corymbosa, *Willd.* ... „ 128
corymbosa, Thw. ... „ 129
exserta, DC. ... „ 129
glabra, DC. ... „ 59
Heyneana, *DC.* ... „ 129
hirsuta, Arn. ... „ 131
lævis, DC. ... „ 130
microcarpa (*macrocarpa*), Kurz ... „ 130
mollis, *W. & A.* ... „ 129
mollis, Br. ... „ 129
plantaginea, *Wall.* ... „ 130
platycarpa, *Arn.* ... „ 131
? stricta, Gærtn. ... „ 129
stricta, Thw. ... „ 129
stricta, W. & A. ... „ 130
sumatrensis, DC. ... „ 131
Knoxia Vol. Page
sumatrensis, Wall. ... iii. 129
teres, *DC.* ... „ 129
teres, Wall. ... „ 129
umbellata, Banks ... „ 129
Wightiana, *Wall.* ... „ 129
Wightiana, Schl. ... „ 51
zeylanica, *Linn.* ... „ 130
KNOXIEÆ ... iii. 20, 128
Kobresia, *Willd.* ... vi. 694
angusta, *Clarke* ... „ 695
brunnescens, Boeck. ... „ 697
capillifolia, *Clarke* ... „ 697
caricina, Willd. ... „ 698
curvirostris, *Clarke* ... „ 699
Duthiei, *Clarke* ... „ 697
elata, Boeck. ... „ 697
filicina, *Clarke* ... „ 696
filifolia, Clarke ... „ 699
fissiglumis, *Clarke* ... „ 696
foliosa, *Clarke* ... „ 696
Hookeri, *Boeck.* ... „ 695
hyalinolepsis, Boeck. ... „ 701
laxa, *Boeck.* ... „ 698
macrantha, *Boeck.* ... „ 699
nitens, *Clarke* ... „ 697
Pseudo-laxa, Benth. ... „ 698
pygmæa, *Clarke* ... „ 696
Royleana, *Boeck.* ... „ 698
Royleana, Hend. ... „ 697
schœnoides, *Boeck.* ... „ 697
schœnoides, Hend. ... „ 698
scirpina, Boeck. ... „ 697
scirpina, Willd. ... „ 697
seticulmis, *Boeck.* ... vi. 695, 696
sibirica, Boeck. ... vi. 697
stenocarpa, Clarke ... „ 698
trinervis, *Boeck.* ... vi. 695, 712
uncinoides, *Clarke* ... vi. 698
vaginosa, *Clarke* ... „ 695
Kochia, *Roth* ... v. 10
Griffithii, Bunge ... „ 11
indica, *Wight* ... „ 11
odontoptera, *Schrenk* ... „ 11
odontoptera, Moq. ... „ 11
prostrata, *Schrad.* ... „ 10
scoparia, *Schrad.* ... „ 11
sedoides, Schrad. ... „ 10
stellaris, Belang. ... „ 11
stellaris, Moq. ... „ 11
Koeleria, *Pers.* ... vii. 308
argentea, *Griseb.* ... „ 309
aristata, Loisel. ... „ 278
berythea, Boiss. & Bl. ... „ 309
brachystachya, DC. ... „ 309
brevifolia, Spreng. ... „ 295
brevifolia, Wight ... „ 334
brevis, Stev. ... „ 309

Koeleria Vol. Page
calycina, DC. & Duby ... vii. 336
cristata, *Pers.* ... „ 308
cristata, Bertol. ... „ 309
dactyloides, Spreng. ... „ 309
Figarei, de Notar. ... „ 309
glauca, DC. ... „ 308
glauca, Ledeb. ... „ 309
gracilis, Pers. ... „ 308
grandiflora, Bertol. ... „ 309
lagopodioides, Panz. ... „ 334
lagopoides, Panz. ... „ 295
Linkii, Kunth ... „ 308
lobata, R. & S. ... „ 308
nitida, Nutt. ... „ 308
obtusiflora, Boiss. ... „ 309
phleoides, *Pers.* ... „ 309
spicata, Willk. & Lange ... „ 278
subspicata, Mart. ... „ 278
trapezuntina, C. Koch ... „ 309
valesiaca, Gaud. ... „ 308
sp., Wall. ... „ 309
Koelpinia, *Pall.* ... iii. 392
linearis, *Pall.* ... „ 392
Koenigia islandica, Linn. ... v. 24
monandra, Dcne. ... „ 24
nepalensis, D. Don ... „ 25
sp., Hk. f. & T. ... „ 25
Kohautia coccinea, Royle ... iii. 69
gracilis, DC. ... „ 68
senegalensis, Endl. ... „ 68
sp., Griff. ... „ 68
Kokoona, *Thw.* ... i. 616
littoralis, *Laws.* ... „ 617
zeylanica, *Thw.* ... „ 616
Koon zeylanicus, Gærtn. ... i. 105
Kopsia, *Bl.* ... iii. 639
flavida, Bl. ... „ 639
fruticosa, *A. DC.* ... „ 639
macrophylla, *Hk. f.* ... „ 639
pauciflora, *Hk. f.* ... „ 639
Korthalsia, *Bl.* ... vi. 474
andamanensis, Becc. ... „ 475
angustifolia, Miq. ... „ 476
echinometra, *Becc.* ... „ 474
ferox, *Becc.* ... „ 476
flagellaris, *Miq.* ... „ 476
laciniosa, *Mart.* ... „ 475
Lobbiana, H. Wendl. ... „ 475
polystachya, *Mart.* ... „ 476
rigida, Bl. ... „ 476
rostrata, Bl. ... „ 475
scaphigera, *Mart.* ... „ 475
scaphigera, Kurz ... „ 475
Scortechinii, *Becc.* ... „ 475
tenuissima, *Becc.* ... „ 476
wallichiæfolia, *H. Wendl.* „ 475
Kosteletzkya pentacarpos, Led. i. 324

Vol. Page
Kraschninnikowia rupestris, Turcz. ... i. 231
Kuhlia morindæfolia, Reinw. iv. 84
Kurrimia, *Wall* ... i. 621
bipartita, *Laws.* ... „ 622
calophylla, Wall. ... „ 622
ceylanica, *Arn.* ... „ 622
Maingayi, *Laws.* ... „ 622
paniculata, *Wall.* ... „ 622
pulcherrima, *Wall.* ... „ 622
robusta, Kurz ... „ 622
sp. ?, Wall. ... ii. 408
Kurzia ... v. 547
Kydia, *Roxb.* ... i. 348
angustifolia, Arn. ... „ 333
axillaris, Thw. ... „ 333
calycina, *Roxb.* ... „ 348
fraterna, Roxb. ... „ 348
glabrescens, *Mast.* ... „ 348
jujubifolia, Griff. ... „ 333
pulverulenta, Ham. ... „ 348
Roxburghiana, Wight ... „ 348
Kyllinga, *Rottb.* ... vi. 587
albescens, Steud. ... „ 667
aurata, Nees ... „ 588
brevifolia, *Rottb.* ... „ 588
brevifolia, ? Heyne ... „ 587
brevifolia, Nees ... „ 588
brevifolia, Rottb. ... „ 620
bulbosa, Kœn. ... „ 620
cruciata, Nees ... „ 588
cylindrica, *Nees* ... „ 588
cyperina, Retz. ... „ 621
cyperoides, Roxb. ... „ 625
fuscata, Miq. ... „ 588
fuscescens, Boeck. ... „ 588
gracilis, Kunth ... „ 588
gracilis, Zoll. ... „ 589
intermedia, Br. ... „ 588
melanosperma, *Nees* ... „ 588
Metzii, Steud. ... „ 589
microcephala, Steud. ... „ 662
mindorensis, Steud. ... „ 589
monocephala, *Rottb.* ... „ 588
monocephala, Nees ... „ 587
monocephala, Strach. ... „ 589
monocephala, Thunb. ... „ 588
monocephala, Vahl ... „ 619
panicea, Rottb. ... „ 621
sororia, Kunth ... „ 588
sororia, Miq. ... „ 589
squamulata, *Vahl* ... „ 589
triceps, *Rottb.* ... „ 587
triceps, Linn. f. ... „ 589
triceps, Thunb. ... „ 588
umbellata, Rottb. ... „ 622
umbellata, Roxb. ... vi. 621, 622

Kyllinga Vol. Page
vaginata, Zoll. ... ... vi. 588
sp., Wall. vi. 587, 588, 589, 597, 620
Kyllingia, see Kyllinga ... vi. 619

Labiata, ? Griff. ... ... iv. 572, 610
LABIATÆ... ... ... iv. 604
Labisia, *Lindl.* ... ... iii. 518
pothoina, *Lindl.* ... ... „ 518
Lablab cultratus, DC. ... ... ii. 209
leucocarpus, DC. ... ... „ 209
lignosus, Grah. ... ... „ 209
microcarpus, DC. ... ... „ 209
nankinicus(*nankinensis*) DC. „ 209
perennans, DC. ... ... „ 209
vulgaris, Savi ... ... „ 209
Lachnæa eriocephala, Heyne v. 197
Lachnagrostis ciliata, Munro vii. 264
ciliata, Nees ... ... „ 264
Griffithiana, Munro ... ... „ 263
Hookeri, Nees ... ... „ 265
Hookeriana, Munro ... ... „ 264
Hookeriana, Nees ... vii. 256, 265
Royleana, Nees ... ... vii. 265
scabra, Nees ... ... „ 264
? *Lachnastoma*, Korth ... ... iii. 154
triflorum, Korth. ... ... „ 154
Lachnopodium rubrolimbatum, Bl. ... ... ii. 523
Lacis Wallichii, Steud. ... v. 67
Lactuca, *Linn.* ... ... iii. 402
amurensis, Regel ... ... „ 405
arvensis, Edgew. ... ... „ 405
Benthamii, *Clarke* ... ... „ 411
bialata, Griff. ... ... „ 405
bracteata, *Hk. f. & T.* ... „ 409
bracteata, Wall. ... ... „ 404
brevirostris, *Champ.* ... „ 405
Brunoniana, Clarke ... ... „ 406
Clarkei, *Hk. f.* ... ... „ 406
decipiens, *Clarke* ... ... „ 407
dissecta, *D. Don* ... ... „ 405
Dubyæa, *Clarke* ... ... „ 409
glabra, DC. ... ... „ 396
graciliflora, *DC.* ... ... „ 406
gracilis, *DC.* ... ... „ 410
hastata, *DC.* ... ... „ 407
Heyneana, *DC.* ... ... „ 403
Hoffmeisteri, Klotz. ... ... „ 408
lævigata, Clarke ... ... „ 408
lævigata, DC. ... ... „ 411
Lessertiana, *Clarke* ... ... „ 408
longifolia, *DC.* ... ... „ 405
macrantha, *Clarke* ... ... „ 409
macrorhiza, *Hk. f.* ... ... „ 408
napifolia, DC. ... ... „ 395
nudicaulis, Murray ... ... „ 416
obtusa, Clarke ... ... „ 416
Lactuca Vol. Page
orientalis, *Boiss.* ... ... iii. 404
polycephala, *Benth.* ... „ 410
ramosissima, Gren. & Godr. „ 404
rapunculoides, *Clarke* ... „ 407
remotiflora, *DC.* ... ... „ 403
rigida, DC. ... ... „ 396
runcinata, DC. ... ... „ 403
sagittarioides, *Clarke* ... „ 410
sagitatta, Hk. f & T. ... „ 410
sarmentosa, DC. ... ... „ 417
sativa, Linn. ... ... „ 404
sativa, Wall. ... ... „ 404
Scariola, *Linn.* ... ... „ 404
Schimperi, J. & S. ... ... „ 403
squarrosa, Miq. ... ... „ 405
Stocksii, Boiss. ... ... „ 405
tatarica, *C. A. Mey.* ... ... „ 406
undulata, *Ledeb.* ... ... „ 404
viminea, Clarke ... ... „ 404
violæfolia, Clarke ... .. „ 412
sp., Benth. ... ... „ 396
Lagaropyxis gigantea, Miq. .. iv. 384
glandulosa, Miq. ... ... „ 383
Lagarosiphon, *Harv.* ... ... v. 659
Roxburghii, *Benth.* ... „ 659
Lagascea, *Cav.* ... ... iii. 302
mollis, *Cav.* ... ... „ 302
Lagenandra, *Dalz.* ... ... vi. 495
insignis, *Trim.* ... ... „ 496
Kœnigii, *Thw.* ... ... „ 496
lancifolia, *Thw.* ... ... „ 496
ovata, Thw. ... ... „ 495
Thwaitesii, *Engler* ... ... „ 496
toxicaria, *Dalz.* ... ... „ 495
Lagenaria, *Seringe* ... ... ii. 613
hispida, Ser. ... ... „ 613
idolatrica, Ser. ... ... „ 612
vittata, Ser. ... ... „ 613
vulgaris, *Ser.* ... ... „ 613
Lagenophora, *Cass.* ... ... iii. 248
Billardieri, *Cass.* ... ... „ 248
Harveyi, Thw. ... . „ 248
sundana, Miq. ... ... „ 248
Lagerstrœmia, *Linn.* ... ... ii. 575
calyculata, *Kurz* ... ... „ 576
corymbosa, Griff. ... ... „ 576
cuspidata, *Wall.* ... ... „ 577
elegans, Wall. ... ... „ 575
Fatioa, Bl. ... ... „ 575
floribunda, *Jack* ... .. „ 577
Flos Reginæ, *Retz.* ... ... „ 577
grandiflora, Roxb. ... ... „ 579
hexaptera, *Miq.* ... ... „ 577
hirsuta, Rottl. ... ... „ 576
hypoleuca, *Kurz* ... ... „ 577
indica, *Linn.* ... ... „ 575
lanceolata, *Wall.* ... ... „ 576

Lagerstrœmia Vol. Page
lanceolata, Bedd. ... ... ii. 575
macrocarpa, Wall. ... ... ,, 577
microcarpa, Wight ... ... ,, 576
parviflora, *Roxb.* ... ... ,, 575
pubescens, Wall. ... ... ,, 578
Reginæ, Roxb. ... ... ,, 577
Rottleri, *Clarke* ... ... ,, 576
tomentosa, *Presl* ... ... ,, 578
venusta, *Wall.* ... ... ,, 576
villosa, *Wall.* ... ... ,, 578
Laggera, *Sch. Bip.* ... ... iii. 270
alata, *Sch. Bip.* ... ... ,, 271
arida, Clarke ... ... ,, 273
aurita, *Sch. Bip.* ... ... ,, 271
divaricata, Oliv. ... ... ,, 271
flava, *Benth.* ... ... ,, 270
pterodonta, *Benth.* ... ... ,, 271
Lagonychium Stephanianum, M. Bieb.... ... ... ii. 288
Lagopsis incana, Bunge ... iv. 671
Lagoseris tenuifolia, Rchb. ... iii. 395
Lagotis, *Gaertn.*... ... ... iv. 558
Clarkei, *Hk. f.* ... ... ,, 559
decumbens, *Rupr.* ... ... ,, 559
glauca, *Gaertn.* ... ... ,, 559
globosa, *Hk. f.* ... ... ,, 558
spectabilis, *Hk. f.* ... ... ,, 560
stolonifera, Koch ... ... ,, 558
Laguna (*Lagunea*), Cav. ... i. 336
aculeata, Cav. ... ... ,, 340
lobata, Willd. ... ... ,, 336
sileniflora, Wall. ... ... ,, 336
Lagunea, Lour. .. .. v. 30
cochinchinensis, Lour. ... ,, 30
Lagurus cylindricus, Linn. ... vii. 106
Lahaya corymbosa, Schult. i. 245
spadicea, Schult. ... ... ,, 245
Lallemantia, *Fisch. & Mey.* iv. 666
Royleana, *Benth.* ... ,, 667
Lamarkia, *Moench* ... ... vii. 307
aurea, *Moench* ... ... ,, 307
Hookeriana, Griff. ... ... ,, 307
Lamium, *Linn.* ... ... iv. 678
album, *Linn.* ... ... ,, 679
amplexicaule, *Linn.* ... ,, 679
petiolatum, Royle ... ... ,, 679
rhomboideum, *Benth.* ... ,, 678
Lampetia racemosa, Rœm. ... i. 512
Lamprachænium, *Benth.* ... iii. 228
microcephalum, *Benth.* ... ,, 229
Lamprocarpus thyrsiflorus, Bl. vi. 367
Lamprodithyros paniculatus, Hassk. ... ... vi. 390
protensus, Hassk. ... ... ,, 382
Lampuzium minus, Rumph. vi. 249
Lancea, *Hk. f. & T.* ... ... iv. 260
tibetica, *Hk. f. & T.* ... ,, 260
Vol. Page
Lancretia suffruticosa, Del. i. 251
Langeveldia acuminata, Gaud. v. 566
Langsdorffia indica, Arn. ... v. 238
Languas aquaticum, Kœn. ... vi. 256
sylvestre, Kœn. ... ... ,, 256
vulgare, Kœn. .. ... ,, 253
Lansium, *Rumph.* ... ... i. 557
anamalayanum, *Bedd.* ... ,, 558
aqueum, Miq. ... ... ,, 558
cinereum, *Hiern* ... ... ,, 558
domesticum, *Jack* ... ... ,, 558
humile, Hassk. ... ... ,, 558
javanicum, Rœm. ... ... ,, 558
pedicellatum, *Hiern* ... ,, 558
silvestre, Rœm. ... ... ,, 559
sp., W. & A. ... ... ,, 562
Lantana, *Linn.* ... ... iv. 562
aculeata, Linn. ... ... ,, 562
alba, Schauer ... ... ,, 562
annua, Hort. Calc.... ... ,, 563
Camara, Linn. ... ... ,, 562
canescens, Hort. Calc. ... ,, 564
collina, Dcne. ... ... ,, 562
crenulata, *Otto & Dietr.* ... ,, 563
dubia, Wall. ... ... iv. 562, 563
indica, *Roxb.* ... ... iv. 562
indica, Wall. ... ... ,, 563
latifolia, Tausch ... ... ,, 562
mista (? *mixta*), Linn. ... ,, 562
repens, Spreng. ... ... ,, 563
sarmentosa, Spreng. ... ,, 563
scabra, Wall. ... ... ,, 563
trifolia, *Linn.* ... ... ,, 563
Wightiana, Wall. ... ... ,, 562
sp., Hk. f. & T. ... iv. 562, 564
Laportea, *Gaud.* ... ... v. 549
crenulata, *Gaud.* ... ... ,, 550
evitata, Wedd. ... ... ,, 549
gigantea, Gaud. ... ... ,, 550
latifolia, Gaud. ... ... ,, 550
oleracea, *Wedd.* ... ... ,, 549
terminalis, *Wight* ... ... ,, 549
Lappa major, Gærtn. ... ... iii. 359
minor, Schkuhr ... ... ,, 359
tomentosa, Lamk. ... ... ,, 359
? *Lappago aliena*, Spreng. vii. 58, 97
biflora, Roxb. ... ... vii. 97
Latipes, Steud. ... ... ,, 97
occidentalis, Nees ... ... ,, 97
racemosa, Honck. ... ... ,, 97
Lapsana, *Linn.* ... ... iii. 391
communis, *Linn.* ... ... ,, 392
Koelpinia, Linn. ... ... ,, 392
LARDIZABALEÆ ... ... i. 107
Larix, *Miller* ... ... v. 655
Griffithiana, Gord. ... ... ,, 655
Griffithii, *Hk. f. & T.* ... ,, 655

Vol. Page
Larysacanthus ciliatus, Oerst. iv. 413
Laserpitium ? coniifolium, Wall. ii. 700
  striatum, Wall. „ 699
  sp., Wall. „ 695
Lasia, *Lour.* vi. 550
  desciscens, Schott „ 550
  Hermanni, Schott „ 550
  heterophylla, *Schott* „ 550
  Jenkinsii, Schott „ 550
  Roxburghii, Griff. „ 550
  spinosa, Thw. „ 550
  Zollingeri, Schott „ 550
Lasiagrostis alpina, F. Schm. vii. 230
  Jacquemontii, Munro „ 232
  mongholica, Trin. „ 229
  robusta, Munro „ 232
  splendens, Kunth „ 233
  tremula, Rupr. „ 229
Lasianthera, *Beauv.* i. 584
  apicalis, *Thw.* „ 584
  ? **lanceolata**, *Mast.* „ 585
  Maingayi, *Mast.* „ 585
  malaccensis, *Mast.* „ 584
  secundiflora, Miq. „ 584
  ? *tetandra*, Wall. „ 586
  prasina, Miq. „ 587
Lasianthus, *Jack* iii. 178
  acuminatus, *Wight* „ 185
  acuminatus, Wight „ 185
  andamanicus, *Hk. f.* „ 189
  appressus, *Hk. f.* „ 181
  attenuatus, *Jack* „ 181
  Biermanni, *King* „ 190
  Blumeanus, *Wight* „ 184
  bracteatus, Wight „ 179
  capitulatus, *Wight* „ 191
  chinensis, *Benth.* „ 187
  ciliatus, *Wight* „ 184
  constrictus, *Wight* „ 188
  crinitus, *Hk. f.* „ 182
  cyanocarpus, *Jack* „ 179
  densifolius, *Miq.* „ 182
  dichotomus, *Wight* „ 191
  ? *dubius*, Wight „ 167
  ellipticus, *Wight* „ 182
  fœtens, Wight „ 193
  Gardneri, *Hk. f.* „ 186
  Griffithii, *Wight* „ 179
  Helferi, *Hk. f.* „ 189
  Hookeri, *Clarke* „ 184
  inconspicuus, *Hk. f.* „ 187
  Jackianus, *Wight* „ 180
  Kurzii, *Hk. f.* „ 183
  lævicaulis, Kurz „ 179
  lancifolius, *Hk. f.* „ 187
  longicauda, *Hk. f.* „ 190

Lasianthus Vol. Page
  longifolius, *Wight* iii. 187
  lucidus, *Bl.* „ 184
  Maingayi, *Hk. f.* „ 188
  micranthus, *Hk. f.* „ 190
  Moonii, *Wight* „ 180
  nitida, Thw. ? „ 189
  obliquus, *Thw.* „ 192
  oblongifolius, *Bedd.* „ 183
  obovatus, *Bedd.* „ 186
  obscurus, *Bl.* „ 183
  Oculus-cati, Miq. „ 179
  oliganthus, *Hk. f.* „ 186
  parvifolius, *Wight* „ 186
  pauciflorus, *Wight* „ 189
  pilosus, *Wight* „ 182
  plagiophyllus, Hance „ 180
  pterospermus, *Wight* „ 188
  retusus, *Wight* „ 181
  rhinophyllus, *Hk. f.* „ 185
  rostratus, Wight „ 185
  Roxburghii, Wight „ 179
  sikkimensis, *Hk. f.* „ 180
  stercorarius, Kurz „ 183
  stipularis, Bl. „ 179
  strigillosus, *Hk. f.* „ 185
  strigosus, *Wight* „ 189
  tentaculatus, *Hk. f.* „ 181
  Thwaitesii, *Hk. f.* „ 185
  truncatus, *Bedd.* „ 189
  tubiferus, *Hk. f.* „ 183
  tubiflorus, Bl. „ 197
  varians, *Hk. f.* „ 191
  venosus, Wight „ 188
  venulosus, *Wight* „ 190
  Walkerianus, *Wight* „ 186
  Wallichii, *Wight* „ 180
  Wightianus, *Hk. f.* „ 188
  sp., Wall. ii. 179, 180, 181, 182
Lasiobema anguina, Miq. ii. 284
  Horsfieldii, Miq. „ 284
Lasiococca, *Hk. f.* v. 456
  symphilliæfolia, *Hk. f.* „ 456
Lasiolepis, Bœck. vi. 748
  Bennettii, Planch. i. 519
  brevifolia, Boeck. vi. 748
  multijuga, Benn. i. 519
  paucijuga, Benn. „ 519
Lasiolytrum hirtum, Steud. vii. 146
  pilosum, Steud. „ 146
Lasiopogon, *Cass.* iii. 287
  lanatum, *Cass.* „ 287
  muscoides, DC. „ 287
Lasiosiphon, *Fres.* v. 197
  eriocephalus, *Dcne.* „ 197
  Hugelii ? Meissn. „ 197
  insularis, Meissn. „ 197
  Metzianus, Miq. „ 197

Lasiosiphon Vol. Page
scandens, Endl. ... ... v. 198
sisparensis, Meissn. ... ... „ 197
speciosus, Dcne. ... ... „ 197
Lasiostoma formicarium, Spreng. ... ... iii. 194
Lasiostyles salicifolia, Presl v. 444
Lasiurus hirsutus, Boiss. ... vii. 162
Lathræa, *Linn.* ... ... iv. 317
squamaria, *Linn.* ... ... „ 318
Lathyrus, *Linn.* ... ... ii. 179
altaicus, *Led.* .. .. „ 180
angulatus, Benth. ... ... „ 180
Aphaca, *Linn.* ... ... „ 179
cashmericus, Royle ... ... „ 180
erectus, Lag. ... ... „ 180
himalensis, Camb. ... ... „ 178
inconspicuus, *Linn.* ... ... „ 180
luteus, *Baker* ... ... „ 180
ovatus, Royle ... ... „ 180
pratensis, *Linn.* ... ... „ 180
sativus, *Linn.* ... ... „ 179
sphæricus, *Retz.* ... ... „ 180
tingitanus, Linn. ... ... „ 180
Latipes, *Kunth* ... ... vii. 97
senegalensis, *Kunth* ... „ 97
Launæa, *Cass.* ... ... iii. 414
aspleniifolia, *Hk. f.* ... ... „ 415
chondrilloides, *Hk. f.* ... „ 415
glomerata, *Hk. f.* ... ... „ 417
microcephala, *Hk. f.* ... „ 415
nudicaulis, *Hk. f.* ... ... „ 416
pinnatifida, *Cass.* ... ... „ 416
secunda, *Hk. f.* ... ... „ 416
Laureola fragrans, Rœm. ... i. 499
Laurinea? Griff. ... ... iii. 575
LAURINEÆ ... ... v. 116
Laurineæ, Wall. ... ... v. 157, 161
Laurus albiflora, Wall. ... ... v. 128
amygdalina, Ham. ... ... „ 118
attenuata, Wall. ... ... „ 143
Bazania, Ham. ... ... „ 129
Bejolghota, Ham. ... ... „ 129
bilocularis, Roxb. ... ... „ 122
bombycina, Ham. ... v. 139, 861
? *camphorata*, Ham. ... v. 141
Cassia, Burm. ... ... „ 132
Cassia, Ham. ... ... „ 129
Cassia, Linn. ... ... „ 179
Cassia, Roxb. ... ... „ 128
caudata, Wall. ... ... „ 134
Champa, Ham. ... ... v. 139, 861
Cinnamomum, Roxb. ... v. 132
? *Culitlaban*, Roxb. ... ... „ 130
cuspidata, D. Don ... ... „ 185
declinata, Bl. ... ... „ 142
dubia, Wall. ... ... „ 132
dulcis, Roxb. ... ... „ 136
Laurus Vol. Page
firma, Wall. ... ... v. 127
floribunda, Wall. ... v. 118, 140
glandulifera, Wall. ... ... v. 135
glaucescens, Ham. ... ... „ 135
glaucescens, Roxb. ... ... „ 140
grandis, Wall. ... ... v. 143, 146
Gullawara, Ham. ... ... v. 152
Heyneana, Wall. ... ... „ 136
incrassata, Jack ... ... „ 126
indica, Lour. ... ... „ 139
involucrata, Koen. ... ... „ 158
involucrata, Vahl ... ... „ 179
lanceolaria, Roxb. ... ... „ 141
lanceolata, Wall. ... ... „ 141
ligustrina, Wall. ... ... „ 142
lucida, Bl. ... ... „ 143
? *lucida*, Wall. ... ... „ 147
macrantha, Wall. ... ... „ 141
? *macrophylla*, D. Don v. 181, 186
macrophylla, Wall. ... ... v. 129
malabathrica, Soland. ... „ 136
malabathrum, L.? ... ... „ 130
malabathrum, Wall. v. 130, 132
Nacusua, D. Don ... ... v. 184
nitida, Roxb. ... ... „ 130
nitida, Wall. ... ... „ 132
obovata, Ham. ... ... „ 153
obtusifolia, Roxb. ... ... „ 129
odoratissima, Wall. ... v. 139, 859
paniculata, Wall. ... ... „ 142
Parthenoxylon, Jack ... „ 136
peduncularis, Wall. ... ... „ 144
porrecta, Roxb. .. ... „ 136
pubescens, Wall. ... ... „ 142
recurvata, Roxb. ... ... „ 129
rigida, Wall. ... ... „ 136
Sailyana, Ham. ... ... „ 128
salicifolia, Ham. . ... „ 141
salicifolia? Wight ... ... „ 174
sericea, Wall. ... ... „ 139
? *smilacifolia*, Wall. ... „ 136
Soncaurium, Ham. ... ... „ 128
Tamala, Ham. ... ... „ 128
Tazia, Ham. ... ... „ 128
umbellata, Ham. ... ... „ 180
villosa, Roxb. ... ... „ 140
viminea, Wall. ... ... „ 131
zeylanica, Herm. ... ... „ 179
Lavallea, Baill. ... ... i. 579
ceylanica, Baill. ... ... „ 579
Lavandula, *Linn.* ... ... iv. 630
Burmanni, *Benth.* .. ... „ 631
carnosa, Linn. ... ... „ 627
Gibsoni, *Grah.* ... ... „ 631
Lawii, Wight ... ... „ 631
multifida, Burm. ... ... „ 631
Perrottetii, Benth. ... ... „ 631

Vol. Page
Lavatera, *Linn.* ... i. 319
kashmiriana, *Camb.* ... „ 319
Lavenia alba, Wall. ... iii. 242
carnosa, Wall. ... „ 242
dentata, Wall. ... „ 247
erecta, Wall. ... „ 242
fastigiata, Bl. ... „ 243
macrophylla, Bl. ... „ 242
parviflora, Bl. ... „ 242
rigida, Wall. ... „ 248
rugosa, Wight ... „ 243
viscida, Wall. ... „ 242
Lawia acuminata, Wight ... iii 96
longipes, Tul. ... v. 63
pulchella, Tul. ... „ 62
zeylanica, Tul. ... „ 62
Lawsonia, *Linn.* ... ii. 573
alba, *Lamk.* ... „ 573
inermis, Roxb. ... „ 573
purpurea, Lamk. .. ii. 573, iii. 56
spinosa, Linn. ... ii. 573
Lebidiera malabarica, Muell. v. 276
pallida, Muell. ... „ 279
patula, Muell. ... „ 279
stipularis, Muell. ... „ 282
Lebidieropsis collina, Muell. v. 274
orbicularis, Muell. ... „ 274
Lebretonia flava, Wall. ... i. 331
procumbens, Wall. ... „ 331
Lecananthus, Jack ... iii. 100
erubescens, *Jack* ... „ 100
sp., Griff. ... „ 100
Lecanocarpus cauliflorus, Nees v. 3
nepalensis, Fisch. ... „ 3
Lecanthus, *Wedd.* ... v. 559
major, Wedd. ... „ 559
peduncularis, Wedd. ... „ 559
Wallichii, Wedd. ... „ 559
Wightii, *Wedd.* ... „ 559
Lechea verticillata, Willd. ... i. 252
LECYTHIDEÆ ... ii. 463
Ledebouria hyacinthina, Roth vi. 348
maculata, Dalz. ... „ 348
Leea, *Linn.* ... i. 664
acuminata, Wall. ... „ 666
æquata, DC. ... „ 667
æquata, Wall. ... „ 666
alata, *Edgew.* ... „ 665
angustifolia, *Laws.* ... „ 665
aspera, *Wall.* ... i. 665, 667
cinerea, *Laws.* ... i. 665
compactiflora, Kurz ... „ 667
cordata, Wall. ... „ 668
coriacea, *Laws.* ... „ 665
crispa, *Willd.* ... „ 665
diffusa, *Laws.* ... „ 667
gigantea, Griff. ... „ 666

Leea Vol. Page
? *herbacea*, Wall. ... i. 666
hirta, *Roxb.* ... „ 668
integrifolia, *Roxb.* ... „ 667
læta, Wall. ... „ 666
lævis, Heyne ... „ 565
latifolia, Wall. ... „ 664
macrophylla, *Roxb.* ... „ 664
? *macrophylla*, DC. ... „ 665
odontophylla, Wall. ... „ 668
ottilis, DC. ... „ 666
parallela, *Wall.* ... „ 666
pinnata, Andrews ... „ 665
pumila, *Kurz* ... „ 666
robusta, *Roxb.* ... „ 667
rubra, Royle ... „ 665
sambucina, *Willd.* ... „ 666
? *sanguinea*, Wall. ... „ 666
scabra, Steud. ... „ 668
simplicifolia, Griff. ... „ 664
staphylea, Roxb. ... „ 667
staphylea, Wall. ... „ 666
trifoliata, *Laws.* ... „ 666
Leersia, *Sw.* ... vii. 94
aristata, Roxb. ... „ 95
australis, Br. ... „ 94
ciliaris, Griff. ... „ 94
ciliata, Roxb. ... „ 94
glaberrima, Trin. ... „ 94
hexandra, *Sw.* ... „ 94
mexicana, H. B. K. ... „ 94
oryzoides, *Sw.* ... „ 94
LEGNOTIDEÆ ... ii. 435
Legouixia amabilis, Muell. ... iii. 666
LEGUMINOSÆ ... ii. 56
Leiocarpus serratus, Hassk. v. 346
Leiocarya Kotschyana, Hochst. iv. 154
Leiospermum ferrugineum, Wall. ... iv. 726
ferrugineum, Wight ... „ 725
Leleba lineata, Rumph. ... vii. 393
Rumphiana, Kurz ... „ 393
Lemna, *Linn.* ... vi. 556
arrhiza, Linn. ... „ 558
cruciata, Roxb. ... „ 557
gibba, *Linn.* ... „ 556
globosa, Roxb. ... „ 558
major, Griff. ... „ 557
melanorrhiza, F. Muell. (*lapsu* Spirodela) ... „ 557
minor, *Linn.* ... „ 556
minor, Griff. ... „ 556
obcordata, Ham. ... „ 556
oligorrhiza, *Kurz.* ... „ 557
orbiculata, Roxb. ... „ 557
paucicostata, *Hegelm.* ... „ 556
pleiorrhiza, F. Muell. (*lapsu* Spirodela) ... „ 557

- Lemna Vol. Page
  - polyrrhiza, *Linn.* ... vi. 557
  - trisulca, *Linn.* ... „ 557
  - *sp.*, Griff. ... „ 557
- LEMNACEÆ ... vi. 556
- *Lencymmæa*, Presl ... ii. 512
- LENTIBULARIEÆ ... iv. 328
- *Leobordea lotoides*, Del. ... ii. 64
- Leonotis, *Br.* ... iv. 691
  - nepetæfolia, *Br.* ... „ 691
- *Leontodon eriopodum*, D. Don iii. 401
  - *eriopus*, Spreng. ... „ 401
  - *glaucescens*, M. Bieb. ... „ 401
  - ? *Kunthianum*, Wall. ... „ 369
  - *parvulum*, Wall. ... „ 401
- *Leontoglossum scabrum*, Hance i. 31
- Leontopodium, *Br.* ... iii. 278
  - alpinum, *Cass.* ... „ 279
  - *himalayanum*, DC. ... „ 279
  - *monocephalum*, Edgew. ... „ 279
- Leonurus, *Linn.* ... iv. 677
  - Cardiaca, *Linn.* ... „ 678
  - *globosus*, Moench ... „ 691
  - *heterophyllus*, Sweet ... „ 678
  - *indicus*, Burm. ... „ 691
  - *Marrubiastrum*, Burm. ... „ 689
  - *pubescens*, Benth. ... „ 678
  - *Royleanus*, Benth. ... „ 678
  - sibiricus, *Linn.* ... „ 678
  - *tartaricus*, Burm. ... „ 678
- *Leopardanthus scandens*, Bl. vi. 19
- *Lepeocercis annulata*, Nees vii. 197
  - ? *digitata*, Nees ... „ 210
  - *digitata*, Royle ... „ 196
  - *pertusa*, Hassk. ... „ 173
  - *serrata*, Trin. ... „ 196
- *Lepidadenia ferruginea*, Miq. v. 160
  - *Griffithii*, Wight ... „ 172
  - *ovalifolia*, Wight ... „ 173
  - *Wightiana*, Nees ... „ 180
- Lepidagathis, *Willd* ... iv. 515
  - *aristata*, Nees ... „ 521
  - *Beddomei*, T. Anders. ... „ 516
  - calycina, *Hochst.* ... „ 519
  - ceylanica, *Nees* ... „ 522
  - chlorostachya, *Nees* ... „ 519
  - clavata, *Dalz.* ... „ 518
  - cristata, *Willd.* ... „ 516
  - *cristata*, Wall. ... „ 517
  - cuspidata, *Nees* ... „ 519
  - diffusa, *Clarke* ... „ 518
  - dulcis, *Nees* ... „ 520
  - *dulcis*, Wall. ... „ 515
  - *falcata*, Wall. ... „ 515
  - fasciculata, *Nees* ... „ 522
  - *goensis*, Dalz. ... „ 522
  - *grandiflora*, Dalz. ... „ 478
  - Hamiltoniana, *Wall.* ... „ 516
- Lepidagathis Vol. Page
  - *hirta*, Nees ... iv. 522
  - hyalina, *Nees* ... „ 521
  - *incurva*, D. Don ... „ 521
  - *iridescens*, T. Anders. ... „ 521
  - linearis, *T. Anders.* ... „ 521
  - longifolia, *Wight* ... „ 523
  - lutea, *Dalz.* ... „ 517
  - mitis, *Dalz.* ... „ 516
  - *mucronata*, Nees ... „ 521
  - *Neesiana*, Wight ... „ 492
  - *nervosa*, Wight ... „ 522
  - *neurophylla*, T. Anders. ... „ 521
  - prostrata, *Dalz.* ... „ 518
  - pungens, *Nees* ... „ 517
  - purpuricaulis, *Nees* ... „ 519
  - rigida, *Dalz.* ... „ 518
  - *riparia*, Nees ... „ 521
  - *rupestris*, Bedd. ... „ 517
  - *rupestris*, Nees ... „ 516
  - scariosa, *Nees* ... „ 520
  - *semiherbacea*, Nees ... „ 521
  - *Shuteri*, T. Anders. ... „ 516
  - simplex, *T. Anders.* ... „ 520
  - *sphærostachya*, Nees ... „ 491
  - spinosa, *Wight* ... „ 517
  - *striata*, Nees ... „ 520
  - *strobilifera*, Stocks ... „ 519
  - strobilina, *T. Anders.* ... „ 523
  - subuninervia, *Clarke* ... „ 519
  - *terminalis*, Hochst. ... „ 520
  - trinervis, *Nees* ... „ 517
  - *ustulata*, Nees ... „ 521
  - Walkeriana, *Nees* ... „ 522
  - *sp.*, Griff. ... „ 521
  - *sp.*, Hk. f. & T. ... „ 517
- LEPIDINEÆ ... i. 130
- Lepidium, *Linn.* ... i. 159
  - capitatum, *Hk. f. & T.* ... „ 160
  - *chalepense*, Schrenk ... „ 160
  - Draba, *Linn.* ... „ 160
  - *incisum*, Edgew. ... „ 160
  - latifolium, *Linn.* ... „ 160
  - *repens*, Boiss. ... „ 160
  - ruderale, *Linn.* ... „ 160
  - sativum, *Linn.* ... „ 159
- LEPIDOCARPEÆ ... vi. 404
- *Lepidocoma trifoliatum*, Jungh. ... ii. 229
- *Lepidopelma podocarpifolia*, Klotz. ... v. 266
- Lepidosperma, *Labill.* ... vi. 676
  - chinense, *Nees & Mey.* ... „ 676
  - *zeylanicum*, Nees ... „ 674
- *Lepidostachys grandifolia*, Planch. ... v. 351
  - *Griffithiana*, Planch. ... „ 349
  - *lanceolata*, Tulasne ... „ 351

Lepidostachys ... Vol. Page
  macrophylla, Tulasne ... v. 346
  ? *oblonga*, Wall. ... „ 348
  parviflora, Planch. ... „ 350
  Roxburghii, Hk. f. & T. ... „ 350
  Roxburghii, Wall. ... „ 348
  ? *villosa*, Wall. ... „ 346
Lepidostemon, *Hk. f. & T.* i. 147
  pedunculosus, *Hk. f. & T.* „ 147
Lepigonum, Fries ... i. 244
Lepionurus, *Bl.* ... i. 583
  oblongifolius, *Mast.* ... „ 583
Lepironia, *Rich.* ... vi. 684
  bancana, Miq. ... „ 680
  ceylanica, Miq. ... „ 682
  cuspidata, Miq. ... „ 683
  humilis, Miq. ... „ 683
  mucronata, *Rich.* ... „ 684
  palustris, Miq. ... „ 681
Lepisanthes, *Bl.* ... i. 679
  Browniana, *Hiern* ... „ 680
  cuneata, *Hiern* ... „ 680
  montana, *Bl.* ... „ 679
Lepistemon, *Bl.* ... iv. 216
  flavescens, Bl. ... „ 216
  flavescens, Wight ... „ 216
  muricatum, Spanog. ... „ 206
  Wallichii, *Chois.* ... „ 216
Lepta triphylla, Lour. ... i. 488
Leptacanthus alatus, Wight iv. 458
  helicoides, Nees ... „ 475
  rubicundus, Nees ... „ 475
  Walkeri, Nees ... „ 475
  Walkeri, Wight ... „ 476
Leptadenia, *Br.* ... iv. 63
  appendiculata, Dcne. ... „ 63
  brevipes, Wight ... „ 63
  gracilis, Dcne. ... „ 64
  imberbe, Wight ... „ 63
  Jacquemontiana, Dcne. ... „ 64
  pyrotechnica, Dcne. ... „ 64
  reticulata, *W. & A.* ... „ 63
  Spartium, *Wight* ... „ 64
Leptanthe macrostachya, Klotz. ... iv. 177
Leptanthes verticillata, Wight v. 659
Leptaspis, *Br.* ... vii. 95
  cochleata, *Thw.* ... „ 95
  manillensis, Steud. ... „ 95
  urceolata, *Br.* ... „ 95
  zeylanica, Nees ... „ 95
Leptatherum Royleanum, Nees ... vii. 118
Leptobæa, *Benth.* ... iv. 368
  glabra, *Clarke* ... „ 368
  multiflora, *Gamble* ... „ 368
  pubescens ... „ 368
Leptocarpæa Læselii, DC. ... i. 151

Vol. Page
Leptochloa, *Beauv.* ... vii. 297
  arabica, Kunth ... „ 297
  bipinnata, Hochst. ... „ 325
  calycina, Kunth ... „ 297
  chinensis, *Nees* ... „ 299
  coromandeliana, Steud. ... „ 297
  cynosuroides, R. & S. ... „ 299
  filiformis, *R. & S.* ... „ 298
  filiformis, Beauv. ... , 299
  ? *fusca*, Kunth ... „ 329
  gracilis, Wight ... „ 297
  ? *monastachya*, R. & S. ... „ 293
  Neesii, Benth. ... „ 298
  obtusiflora, *Hochst.* ... „ 299
  ? *panicoides*, Wight ... „ 76
  ? *pectinata*, Kunth ... „ 294
  pectinata, Steud. ... „ 76
  polystachya, *Benth.* ... „ 298
  polystachya, Kunth ... „ 298
  ? *racemosa*, Kunth ... „ 298
  tenerrima, R. & S. ... „ 299
  tripogonoides, Munro ... „ 286
  uniflora, *Hochst.* ... „ 297
  verticillata, Kunth ... „ 295
  Wightiana, Nees ... „ 327
  sp., Wall. ... „ 298
Leptocnide borbonica, Bl. ... v. 581
Leptocodon, *Hk. f. & T.* ... iii. 430
  gracilis, *Hk. f. & T.* ... „ 430
Leptocoma racemosa, Less. ... iii. 248
Leptodermis, *Wall.* ... iii. 198
  Griffithii, *Hk. f.* ... „ 198
  lanceolata, *Wall.* ... „ 198
  scabrida, *Hk. f.* ... „ 199
  virgata, *Edgew.* ... „ 198
  sp.? ... „ 199
Leptodesmia, *Benth.* ... ii. 152
  congesta, *Benth.* ... „ 152
Leptolepis tibetica, Boeck. vi. 660, 712
Leptonema melanthesioides, Muell. ... v. 328
Leptonium oblongifolium, Griff. ... i. 583
Leptonychia, *Turcz.* ... i. 378
  acuminata, *Mast.* ... „ 379
  glabra, *Turcz.* ... „ 379
  moacurroides, *Bedd.* ... „ 379
Leptopus cordifolius, Dcne. v. 284
Leptorhabdos, *Schrenk* ... iv. 303
  Benthamiana, *Walp.* ... „ 303
  linifolia, *Walp.* ... „ 304
  parviflora, Benth. ... „ 303
  virgata, Benth. ... „ 303
Leptospartion grandiflorum, Griff. ... ii. 579
LEPTOSPERMEÆ ... ii. 462
Leptospermum, *Forst.* ... ii. 464

Leptospermum Vol. Page
amboinense, *Bl.* ... ... ii. 464
flavescens, Sm. ... ... „ 464
floribundum, Jungh. ... „ 464
javanicum, *Bl.* ... ... „ 464
scabrum, Wall. ... ... „ 407
stamineum, Wall. ... ... „ 407
Leptostachya dichotoma, Nees ... ... iv. 543
virgata, Nees ... ... „ 542
Wallichii, Nees ... ... „ 542
zeylanica, Nees ... ... „ 532
Leptostemma fasciculatum, Bl. iv. 50
hirsutum, Bl. ... ... „ 50
Lepturus, *Br.* ... ... vii. 365
aciculatus, Steud. ... ... „ 365
fasciculatus, Trin. ... ... „ 153
repens, *Br.* ... ... „ 365
Roxburghianus, *Steud.* ... „ 365
Lepurandra saccidora, Nimm. v. 537
Lepyrodiclis, Fenzl ... ... i. 241
holosteoides, Fenzl ... ... „ 241
tenera, Boiss. ... ... „ 242
Lespedeza, *Mich.* ... ... ii. 142
argyræa, Sieb. & Zucc. ... „ 142
bicolor, Turcz. ... ... „ 143
cuneata, G. Don ... ... „ 142
decora, *Kurz* ... ... „ 144
elegans, *Camb.* ... ... „ 143
elliptica, *Benth.* ... ... „ 143
eriocarpa, *DC.* ... ... „ 144
Gerardiana, *Grah.* ... ... „ 142
glomerata, Hornem. ... „ 143
hirta, Elliott ... ... „ 143
indica, Spreng. ... ... „ 220
involucrata, Wall. ... ... „ 229
juncea, *Pers.* ... ... „ 142
juncea, Wall. ... ... ii. 94, 142
kanaorensis, Camb. ... ... ii. 142
lagopoides, Pers. ... ... „ 156
lineata, Pers. ... ... „ 228
macrostyla, *Baker* ... ... „ 143
paniculata, Royle ... ... „ 144
parviflora, *Kurz* ... ... „ 144
pinetorum, Kurz ... ... „ 145
Royleana, Miq. ... ... „ 144
sericea, *Miq.* ... ... „ 142
sericea, Royle ... ... „ 144
Thomsoni, *Benth.* ... ... „ 144
tomentosa, *Sieb.* ... ... „ 143
variegata, Camb. ... ... „ 142
viatorum, Champ. ... ... „ 143
Lettsomia, *Roxb.* ... ... iv. 191
adpressa, *Miq.* ... ... „ 196
aggregata, *Roxb.* ... ... „ 191
argentea, Roxb. ... ... „ 185
atropurpurea, *Clarke* ... „ 194
barbata, *Clarke* ... ... „ 195

Lettsomia Vol. Page
barbigera, *Clarke* ... ... iv. 193
bella, *Clarke* ... ... „ 192
Bona-nox, Roxb. ... ... „ 184
bracteosa, *Clarke* ... ... „ 192
capitata, Miq. ... ... „ 193
cuneata, Roxb. ... ... „ 191
cymosa, Roxb. ... ... „ 190
elliptica, *Wight* ... ... „ 192
elliptica, Wight ... ... „ 195
hancorniæfolia, *Clarke* ... „ 196
hirsutissima, *Clarke* ... „ 193
? Kurzii, *Clarke* ... ... „ 196
Maingayi, *Clarke* ... ... „ 195
mysorensis, *Clarke* ... ... „ 192
nervosa, Hort. ... ... „ 187
nervosa, Roxb. ... ... „ 185
ornata, Roxb. ... ... „ 183
peguensis, *Clarke* ... ... „ 193
penangiana, *Miq.* ... ... „ 196
pomacea, Roxb. ... ... „ 188
rubens, *Clarke* ... ... „ 195
rubicunda, *Clarke* ... ... „ 195
setosa, *Roxb.* ... ... „ 194
sikkimensis, *Clarke* ... ... „ 194
speciosa, Roxb. ... ... „ 185
splendens, Roxb. ... ... „ 186
strigosa, *Roxb.* ... ... „ 193
Thomsoni, *Clarke* ... ... „ 193
uniflora, Roxb. ... ... „ 184
Leucæna, *Benth.* ... ... ii. 290
glauca, *Benth.* ... ... „ 290
Leucas, *Br.* ... ... iv. 680
angularis, *Benth.* ... ... „ 684
angustifolia, Wall ... ... „ 682
aspera, *Spreng.* ... ... „ 690
aspera, Hohen. ... ... „ 691
biflora, *Br.* ... ... „ 683
biflora, Wall. ... ... „ 683
capitata, *Desf.* ... ... „ 689
Cephalotes, *Spreng.* ... ... „ 689
chinensis, *Br.* ... ... „ 681
ciliata, *Benth.* ... ... „ 687
Clarkei, *Hk. f.* ... ... „ 688
collina, Dalz. ... ... „ 681
decemdentata, Sm. ... ... „ 684
decurva, Benth. ... ... „ 688
diffusa, *Benth.* ... ... „ 689
dimidiata, *Spreng.* ... ... „ 691
dimidiata, Benth. ... ... „ 690
eriostoma, *Hk. f.* ... ... „ 686
flaccida, *Br.* ... ... „ 684
hamatula, Arn. ... ... „ 686
? Hamiltoniana, Benth. ... „ 682
Helferi, *Hk. f.* ... ... „ 681
helianthemifolia, *Desf.* ... „ 685
helianthemifolia, Benth. ... „ 687
hirta, *Spreng.* ... ... „ 687

Leucas ... Vol. Page
  hyssopifolia, *Benth.* ... iv. 690
  involucrata, Benth. ... „ 689
  lamiifolia, *Desf.* ... „ 686
  lanata, *Benth.* ... „ 681
  lanceæfolia, *Desf.* ... „ 685
  lanciformis, Wall. ... „ 685
  lavandulæfolia, Sm. ... „ 691
  lepistoma, Hb. Wight. ... „ 686
  linifolia, *Spreng.* ... „ 690
  longifolia, *Benth.* ... „ 684
  marrubioides, *Desf.* ... „ 683
  marrubioides, Wall. ... „ 684
  martinicensis, *Br.* ... „ 688
  melissæflora, Benth. ... „ 684
  melissæfolia, Benth. ... „ 684
  membranacea, Benth. ... „ 680
  mollissima, *Wall.* ... „ 682
  montana, *Spreng.* ... „ 682
  montana, Wight ... „ 682
  nepetæfolia, *Benth.* ... „ 681
  nutans, *Spreng.* ... „ 688
  ovata, *Benth.* ... „ 682
  parviflora, Benth. ... „ 684
  pilosa, *Benth.* ... „ 683
  Plukenetii, Benth. ... „ 690
  polycephala, Wall. ... „ 688
  procumbens, *Desf.* ... „ 683
  procumbens, Thw. ... „ 683
  pubescens, *Benth.* ... „ 684
  pubescens, Thw. ... „ 684
  rosmarinifolia, *Benth.* ... „ 685
  rufescens, Benth. ... „ 687
  stelligera, *Wall.* ... „ 686
  stricta, *Benth.* ... „ 688
  strigosa, Benth. ... „ 682
  suffruticosa, *Benth.* ... „ 685
  teres, *Benth.* ... „ 680
  ternifolia, Desf. ... „ 685
  urticæfolia, *Br.* ... „ 680
  vestita, *Benth.* ... „ 686
  Walkeri, Benth. ... „ 689
  Wightiana, *Benth* ... „ 690
  zeylanica, *Br.* ... „ 689
  zeylanica, Dalz. ... „ 681
Leucoblepharis subsessilis, Arn. ... iii. 276
Leucocasia gigantea, Schott vi. 524
Leucocephala graminifolia, Roxb. ... vi. 582
  spathacea, Roxb. ... „ 578
Leucococcus orientalis, Liebm. v. 588
Leucocodon, *Gardn.* ... iii. 93
  reticulatum, *Gardn.* ... „ 94
Leucodermis (*Leucoderis*) *javanica*, Planch. ... i. 605
Leucodictyon malvensis, Dalz & Gibs. ... ii. 192
Leucojum capitulatum, Lour. vi. 278
Leucomeris, *D. Don* ... iii. 386
  decora, *Kurz* ... „ 387
  macrophylla, DC. ... „ 386
  spectabilis, *D. Don* ... „ 386
Leuconotis, *Jack* ... iii. 627
  anceps, Jack ... „ 628
  cuspidatus, Bl. ... „ 628
  eugenifolius, *A. DC.* ... „ 627
  Griffithii, *Hk. f.* ... „ 628
  Maingayi, *Dyer* ... „ 628
Leucopoa sibirica, Griseb. ... vii. 355
Leucopogon, *R. Br.* ... iii. 477
  malayanus, *Jack* ... „ 477
  moluccanus, Scheff. ... „ 477
Leucorchis, Bl. ... vi. 121
  sylvatica, Bl. ... „ 122
Leucosceptrum, *Sm.* ... iv. 699
  canum, *Sm.* ... „ 699
Leucostachys, Hoffm. ... vi 111
Leucostemma latifolia, Benth. i. 231
  Webbiana, Wall. ... „ 230
Leucothoe, *D. Don* ... iii. 460
  Griffithiana, *Clarke* ... „ 460
  ? *katagherensis*, DC. ... „ 457
Leucoxylum buxifolium, Bl. ... iii. 559
? *Levisticum argutum*, Lindl. ii. 699
Leycesteria, *Wall.* ... iii. 16
  formosa, *Wall.* ... „ 16
  glaucophylla, *Hk. f.* ... „ 16
Lhodra cratægoides, Dcne. ... iii. 573
Liatris lobelioides, Wall. ... iii. 388
Libanotus asiaticus, Stackh. i. 528
Libanus thurifera, Colebr. ... i. 528
Libocedrus macrolepis, Benth. v. 645
Lichenora Jerdoniana, Wight v. 787
Licuala, *Thunb.* ... vi. 430
  acutifida, *Mart.* ... „ 433
  ferruginea, *Becc.* ... „ 432
  glabra, *Griff.* ... „ 432
  horrida, Bl. ... „ 431
  Kingiana, *Becc.* ... „ 434
  Kunstleri, *Becc.* ... „ 433
  longipes, *Griff.* ... „ 431
  malayana, *Becc.* ... „ 431
  modesta, *Becc.* ... „ 433
  paludosa, *Griff.* ... „ 430
  paludosa, Kurz ... „ 431
  peltata, *Roxb.* ... „ 430
  pusilla, *Becc.* ... „ 433
  ramosa, Bl. ... „ 431
  Scortechini, *Becc.* ... „ 434
  spinosa, *Wurmb.* ... „ 431
  triphylla, *Griff.* ... „ 432
Lightfootia gracilis, Miq. ... iii. 429
Ligularia amplexicaulis, DC. iii. 348
  arnicoides, DC. ... „ 351

Ligularia Vol. Page
arnicoides, Wall. ... ... iii. 332
corymbosa, DC. ... ... „ 348
frigida, Schultz ... ... „ 351
nana, Dcne. ... ... „ 357
palmata, Hk. f. & T. ... „ 331
pinnatifida, Hk. f. & T. ... „ 332
racemosa, DC. ... ... „ 350
reniformis, DC. ... ... „ 331
retusa, DC. ... ... „ 350
sibirica, Cass. ... ... „ 350
sp., Hk. f. & T. ... ... „ 331
Ligusticum, *Linn.* ... .. ii. 698
Ajawain, Fleming ... ... „ 682
Ajouan, Roxb. ... ... „ 682
angelicoides, Wall. ... ... „ 703
Benthami, Wall. ... ... „ 703
Brunonis, Wall. ... ... „ 706
Candollii, Wall. ... ... „ 703
coniifolium, DC. ... ... „ 700
dentatum, Wall. ... ... „ 704
diffusum, Roxb. ... ... „ 693
elatum, *Clarke* ... ... „ 698
Govanianum, Wall. ... ... „ 702
indicum, Wall. ... ... „ 693
marginatum, *Clarke* ... „ 698
? *meoides*, Jacquem ... ... „ 671
? *nepalense*, D. Don ... „ 720
obtusiusculum, Wall. ... „ 673
pumilum, Wall. ... ... „ 704
rotundatum, Wall. ... ... „ 703
striatum, DC. ... ... „ 699
Thomsoni, *Clarke* ... ... „ 698
Ligustrum, *Linn.* ... ... iii. 614
bracteolatum, D. Don ... „ 617
Candolleanum, Bl. ... ... „ 615
Candolleanum, Dcne. ... „ 615
ceylanicum, Dcne. ... ... „ 614
compactum, *Hk. f. & T.* ... „ 616
compactum, Dcne. ... ... „ 615
confusum, *Dcne.* ... ... „ 616
Decaisnei, *Clarke* ... ... „ 616
grandiflorum, Wall. ... .. „ 617
kumaonense, Dcne. ... ... „ 617
laurifolium, Roxb. ... ... „ 618
lucidum, Aiton ... . „ 615
Massalongianum, *Vis.* ... „ 616
microphyllum, Wight ... , 616
microphyllum, Bedd. ... „ 616
Myrsinites, *Dcne.* ... ... „ 617
neilgherrense, *Wight* ... „ 615
neilgherrense, Dcne. ... „ 616
nepalense, *Wall.* ... ... „ 617
parviflorum, Vis. ... ... „ 617
Perrottetii, *A. DC.* ... ... „ 615
pubescens, Wall. ... ... „ 614
punctatum, Griff. ... ... „ 614
robustum, *Bl.* ... ... „ 614
Ligustrum Vol. Page
robustum, Bedd. ... ... iii. 615
robustum, Thw. ... ... „ 614
robustum, Wall. ... ... „ 616
Roxburghii, *Clarke* .. ... „ 615
spicatum, Ham. ... ... „ 617
Uva-ursi, Dcne. ... „ 617
vestitum, Wall. ... ... „ 617
Walkeri, *Dcne.* ... ... „ 614
Wallichii, Bl. ... ... „ 617
sp., Griff. ... ... „ 616
sp., Hk. f. & T. iii. 614, 616, 617
Liliacea, Griff. ... ... vi. 355
LILIACEÆ ... ... vi. 299
Lilium, *Linn.* ... ... vi. 349
Bakerianum, *Hemsl. & Coll.* „ 350
Batisua, Ham. ... ... „ 350
claptonense, Hort. ... ... „ 351
cordifolium, D. Don ... „ 349
giganteum, *Wall.* ... ... „ 349
Hookeri, Baker ... ... „ 352
longiflorum, Wall. ... ... „ 350
longifolium, Griff. ... ... „ 352
Lowii, *Baker* ... ... „ 350
Metzii, Steud. ... ... „ 350
nanum, *Klotz.* ... ... „ 352
neilgherrense, *Wight* ... „ 350
neilgherrense, Hemsl. & Coll. ... ... „ 351
neilgherricum, Lem. ... „ 350
nepalense, *D. Don* ... ... „ 350
nepalense, Coll. & Hemsl. „ 350
ochroleucum, Wall. ... ... „ 351
oxypetalum, Baker ... ... „ 353
polyphyllum, *D. Don* ... „ 351
primulinum, *Baker* ... ... „ 351
punctatum, Jacq. ... ... „ 351
roseum, *Wall.* ... ... „ 352
roseum, Wall. ... ... „ 352
stylosum, Klotz. ... ... „ 351
sulphureum, *Baker* ... ... „ 351
Thomsonianum, *Royle* ... „ 352
Thomsonianum, Lindl. ... „ 352
triceps (*lapsu* Fritillaria), Klotz. ... . „ 353
tubiflorum, Wight ... ... „ 350
Wallichianum, *Schultes f.* „ 349
Wallichianum, Wight ... „ 350
Limacia, *Lour.* ... ... i. 100
Amherstiana, Miers ... „ 100
cuspidata, *Hk. f. & T.* ... „ 100
distincta, Miers ... ... „ 100
inornata, Miers ... ... „ 100
oblonga, *Miers* ... ... „ 100
triandra, *Miers* ... ... „ 100
velutina, *Miers* ... ... „ 100
Wallichiana, Miers ... ... „ 100
Limatodes gracilis, Lindl. ... v. 855

Limatodes Vol. Page
labrosa, Rchb. f. ... ... v. 856
mishmensis, Lindl. & Paxt. „ 817
rosea, Lindl. ... ... „ 856
Limeum, *Linn.* ... ... ii. 664
indicum, *Stocks* ... ... „ 664
Limnanthemum, *S. P. Gmel.* iv. 131
aurantiacum, *Dalz.* ... ... „ 132
biflorum, Thw. ... ... „ 132
calycinum, Miq. ... ... „ 132
cristatum, *Griseb.* ... ... „ 131
Forbesianum, *Griseb.* ... „ 132
indicum, *Thw.* ... ... „ 131
Kleinianum, Griseb. ... „ 131
Moonii, Thw. ... ... „ 132
nymphæoides, *Link* ... ... „ 131
parvifolium, *Griseb.* ... „ 132
Wightianum, Griseb. ... „ 132
Limnochloa, Nees ... vi. 625, 628
acutangula, Nees ... ... vi. 627
media, Nees ... ... „ 627
plantaginea, Nees ... ... „ 626
spiralis, Nees ... ... „ 627
tumida, Nees ... ... „ 626
Limnogeton (*Limogeton*) *sp.*, Edgew. ... ... vi. 564
Limnophila, *Br.* ... ... iv. 265
balsamea, *Benth.* ... ... „ 266
Benthamiana, Miq. ... ... „ 271
campanuloides, Benth. ... „ 80
camphorata, Benth. ... ... „ 267
cana, *Griff.* ... ... „ 269
chamædrifolia, G. Don ... „ 273
conferta, *Benth.* ... ... „ 266
diffusa, *Benth.* ... ... „ 266
diffusa, G. Don ... ... „ 267
elongata, Benth. ... ... „ 271
erecta, *Benth.* ... ... „ 267
gratioloides, *Br.* ... ... „ 271
gratissima, *Bl.* ... ... iv. 268, 273
Griffithii, *Hk. f.* ... ... iv. 271
Helferi, *Hk. f.* ... ... „ 269
heterophylla, *Benth.* ... „ 270
hirsuta, *Benth.* ... ... „ 268
hypericifolia, *Benth.* ... „ 269
hyssopifolia, Roth ... ... „ 272
laxa, *Benth.* ... ... „ 267
laxa, Benth. ... ... „ 267
Menthastrum, Benth. ... „ 265
micrantha, *Benth.* ... ... „ 267
myriophylloides, Roth ... „ 271
polyantha, *Kurz* ... ... „ 268
polystachya, *Benth.* ... „ 269
pulcherrima, *Hk. f.* ... „ 267
punctata, Bl. ... .. iv. 268, 273
? *punctata*, Vahl ... ... iv. 266
pygmæa, *Hk. f.* ... ... „ 268
racemosa, *Benth.* ... ... „ 271

Limnophila Vol. Page
reflexa, Benth. ... ... iv. 270
repens, Benth. ... ... „ 266
Roxburghii, *G. Don* ... „ 265
Roxburghii, Benth. . .. „ 271
serrata, Benth. ... ... „ 266
serrata, Gaud. ... ... „ 266
sessiliflora, *Bl.* ... ... „ 270
sessiliflora, Griff. ... ... „ 272
tillæoides, *Hk. f.* ... ... „ 270
trifida, Spreng. ... ... „ 271
villifera, Miq. ... ... „ 266
Limnophyton, *Miq.* ... ... vi. 560
obtusifolium, *Miq.* ... ... „ 560
Limodorum angustifolium, Ham. vi. 13
aphyllum, Roxb. ... ... v. 739
bicallosum, Ham. ... ... vi. 196
bicolor, Roxb. ... ... „ 2
bidentatum, Willd. ... ... „ 197
bracteatum, Roxb. ... ... v. 818
callosum, Bl. ... ... „ 817
candidum, Roxb. ... .. vi. 18
carinatum, Willd. ... .. v. 856
clavatum, Willd. ... ... vi. 66
complanatum, Willd. ... „ 41
dubium, Ham. . ... „ 4
ensatum, Thunb. ... ... „ 14
epidendroides, Willd. ... „ 1
Flos aeris, Sw. ... ... „ 28
graminifolium, Ham. ... v. 857
liliiflorum, Willd. ... ... vi. 198
longifolium, Ham. ... ... „ 12
longifolium, Roxb. ... ... „ 13
nutans, Roxb. ... . „ 16
pusillum, Willd. ... ... „ 37
ramentaceum, Roxb. ... „ 4
recurvum, Roxb. ... ... „ 17
retusum, Sw. ... ... „ 32
roseum, D. Don ... ... „ 124
spathulatum, Willd. ... „ 51
striatum, Reinw. ... ... v. 854
subulatum, Willd. ... ... vi. 44
Tankervilliæ, Roxb. ... ... v. 816
veratrifolium, Willd. ... „ 851
virens, Sw. ... ... vi. 1
Limonia, *Linn.* ... ... i. 507
acidissima, *Linn.* ... ... „ 507
alata, *W. & A.* ... ... „ 508
alternans, *Wall.* ... ... „ 508
alternifolia, Kurz ... ... „ 508
? *angustifolia*, Wall. ... „ 500
arborea, Roxb. ... ... „ 500
bilocularis, Roxb. ... ... „ 508
? *caudata*, Wall. ... ... „ 513
citrifolia, Roxb. ... ... „ 510
crenulata, Roxb. ... ... „ 507
diacantha, DC. ... ... „ 507
? *flavicans*, Wall. ... ... „ 508

Limonia ... Vol. Page
grandiflora, Wall. ... ... i. 510
Laureola, DC. ... ... ,, 499
Laureola, Wall. ... ... ,, 499
leptostachya, Jack i. 492, v. 378
missionis, Wall. ... 510, 512, 513
missionis, Wight ... ... i. 513
mollis, Wall. ... ... ,, 504
monophylla, Linn. ... ... ,, 512
oblonga, Wall. ... ... i. 508, 510
oligandra, Dalz. ... ... i. 497
pentagyna, Roxb. ... ... ,, 508
pentagyna, Roxb. ... ... ,, 531
pentaphylla, Retz. ... ... ,, 500
? **pubescens**, *Wall.* ... ... ,, 507
pusilla, Gærtn. ... ... ,, 191
retusa, D. Don ... ... ,, 508
scandens, Roxb. ... ... ,, 509
trifoliata, Linn. ... ... ,, 507
Limosella, *Linn.* . ... iv. 288
aquatica, *Linn.* ... ... ,, 288
diandra, Linn. ... ... ,, 288
Linaria, *Juss.* ... ... iv. 251
cabulica, *Benth.* . ... ,, 251
incana, *Wall.* ... ... ,, 252
minor, *Desf.* ... ... ,, 252
ramosissima, *Wall.* ... ... ,, 251
Roylei, Chav. ... ... ,, 251
sphærocarpa, Benth. ... ,, 252
striata, DC. ... ... ,, 251
triphylla, Mill. ... ... ,, 251
Lindelofia, *Lehm.* ... ... iv. 159
anchusoides, Lehm. ... ... ,, 161
Benthami, *Hk. f.* ... ... ,, 159
spectabilis, *Lehm.* ... ... ,, 159
Lindenbergia, *Lehm.* ... ... iv. 261
abyssinica, *Hochst.* ... ... ,, 262
grandiflora, *Benth.* ... ... ,, 261
Griffithii, *Hk. f.* ... ,, 262
Hookeri, *Clarke* ... ... ,, 261
macrostachya, *Benth.* ... ,, 262
philippensis, *Benth.* ... ,, 261
polyantha, *Royle* ... ... ,, 262
siamensis, Miq. ... ... ,, 262
urticæfolia, *Lehm.* ... ... ,, 262
sp., Hk. f. & T. ... ... ,, 261
Lindera, *Thunb.* ... ... v. 182, 862
assamica, *Kurz* ... ... v. 182
bifaria, *Benth.* ... ... ,, 184
bootanica, *Meissn.* ... ... ,, 186
caudata, *Benth.* ... ... ,, 184
citriodora, Hk. f. (*Aperula*, Bl.) ... ... ,, 183
Griffithii, *Meissn.* ... ... ,, 187
heterophylla, *Meissn.* ... ,, 186
Hookeri, Meissn. ... ... ,, 156
Kingii, Hk. f. ... ... ,, 183
latifolia, *Hk. f.* ... ... ,, 183
Lindera ... Vol. Page
malaccensis, *Hk. f.* ... ... v. 183
Meissneri, *King* ... ... ,, 182
melastomacea, *Benth.* v. 185, 862
Neesiana, *Benth.* ... ... ,, 186
nervosa, Kurz ... ... ,, 161
oxyphylla, *Benth.* ... ... ,, 183
pulcherrima, *Benth.* ... ,, 185
reticulata, *Benth.* ... ... ,, 183
? **sikkimensis**, *Meissn.* ... ,, 187
triloba, Hk. f. & T. ... ... ,, 186
venosa, *Benth.* ... ... ,, 184
Lindernia japonica, Thunb. iv. 259
Kitaibelii, G. Don ... ... ,, 281
? *micrantha*, D. Don ... ,, 283
pyxidaria, All. ... ... ,, 281
sesamoides, Spreng. ... ,, 273
LINEÆ, ... i. 409
Linociera, *Swartz* ... ... iii. 607
acuminata, Wall. ... ... ,, 610
albidiflora, *Clarke* ... ... ,, 608
continifolia, Vahl ... ... ,, 611
dichotoma, Wall. ... ... ,, 608
insignis, *Clarke* ... ... ,, 610
intermedia, *Wight* ... ... ,, 609
laxiflora, Bl. ... ... ,, 610
leprocarpa, *Clarke* ... ... ,, 608
? *loranthifolia*, Wall. ... ,, 611
macrophylla, *Wall.* ,, 610
malabarica, *Wall.* ... ... ,, 607
minutiflora, *Clarke* ... ... ,, 610
Muelleri, V. Heurck... ... ,, 611
? *oblonga*, Wall. ... ... ,, 609
pauciflora, *Clarke* ... ... ,, 609
pauciflora, Wall. ... ... ,, 609
purpurea, Vahl ... ... ,, 608
ramiflora, Wall. ... ... ,, 611
rostrata, Thw. ... ... ,, 608
tenuiflora, Wall. ... ... ,, 611
terniflora, *Wall.* ... ... ,, 610
Wightii, *Clarke* ... ... ,, 608
sp. Hk. f. & T. ... ... ,, 610
Linostoma, *Wall.* ... ... v. 197
decandrum, *Wall.* ... ... ,, 198
pauciflorum, *Griff.* ... ... ,, 198
scandens, *Kurz* ... . ,, 198
siamense, Kurz ... ... ,, 198
Linum, *Linn.* ... ... i. 410
Cicanobum, D. Don ... ... ,, 412
corymbulosum, Rchb. ... ,, 411
humile, Heyne ... ... ,, 411
humile, Mill. ... ... ,, 411
mysorense, *Heyne* ... ... ,, 411
perenne, *Linn.* ... ... ,, 411
repens, D. Don ... ... ,, 412
Stocksianum, Boiss. ... ... ,, 411
strictum, *Linn.* ... ... ,, 411
tetragynum, Colebr. ... ,, 412

Linum Vol. Page
trigynum, Roxb. ... ... i. 412
trinervium, Hohen. ... ... „ 411
trinervium, Roth ... ... „ 410
usitatissimum, *Linn.* ... „ 410
Liparis, *Rich.* ... ... v. 691
acuminata, *Hk. f.* v. 696, vi. 181
alata, *A. Rich.* ... ... v. 707
angustifolia, Thw. ... ... „ 701
atropurpurea, *Lindl.* ... „ 698
atropurpurea, Wight ... „ 695
auriculata, Rchb. f. ... ... „ 701
barbata, *Lindl.* ... ... „ 696
Beddomei, *Ridl.* ... ... „ 695
bidentata, Griff. ... ... „ 707
biloba, *Wight* ... ... „ 699
bistriata, *Par. & Rchb. f.* „ 702
bituberculata, *Lindl.* ... „ 696
bootanensis, *Griff.* v. 700, vi. 182
bootanensis, Ridl. ... ... v. 700
? *Boothii*, Regel ... ... „ 703
brachyglottis, *Rchb. f.* ... „ 699
bracteosa, Wall. ... ... „ 782
cæspitosa, Ridl. ... ... „ 701
campylostalix, *Rchb. f.* ... „ 694
Cathcartii, *Hk. f.* ... ... „ 694
compressa, *Lindl.* ... ... „ 706
condylobulbon, *Rchb. f.* ... „ 704
cordifolia, *Hk. f.* ... ... „ 692
Cumingii, Ridl. ... ... „ 707
Dalzellii, *Hk. f.* ... ... „ 698
decurrens, Ridl. ... ... „ 705
decursiva, Rchb. f. v. 707, vi. 183
deflexa, *Hk. f.* ... v. 697, vi. 181
delicatula, *Hk. f.* ... ... v. 705
densiflora, A. Rich. ... ... „ 691
diodon, *Rchb. f.* ... ... „ 693
diphyllos, Nimmo ... ... vi. 152
distans, *Clarke* ... v. 704, vi. 183
disticha, *Lindl.* ... ... v. 706
Dolabella, *Hk. f.* ... ... vi. 183
Duthiei, *Hk. f.* ... ... v. 701
elegans, *Lindl.* ... ... „ 699
elliptica, Wight ... ... „ 704
ferruginea, *Lindl.* ... ... „ 697
flaccida, *Rchb. f.* v. 703, vi. 182
Gamblei, *Hk. f.* ... ... v. 693
Glossula, *Rchb. f.* ... ... „ 663
gracilis, *Hk. f.* ... ... vi. 182
gregaria, Lindl. ... ... v. 706
Griffithii, *Ridl.* ... v. 700, 702
grossa, *Rchb. f.* ... ... v. 707
Hookeri, Ridl. ... ... „ 704
? *intermedia*, A. Rich. ... „ 690
Jovis pluvii, *Par. & Rchb.* „ 697
lacerata, *Ridl.* ... ... „ 702
lancifolia, *Hk. f.* ... ... „ 700
latifolia, *Lindl.* v. 703, vi. 182

Liparis Vol. Page
livida, *Royle* ... ... v. 707
livida, Lindl. ... ... „ 699
longipes, *Lindl.* ... ... „ 703
luteola, *Lindl.* ... ... „ 704
macrantha, Hk. f. ... ... „ 704
macrocarpa, *Hk. f.* ... ... „ 696
Mannii, *Rchb. f.* ... ... „ 701
mucronata, Lindl. ... ... „ 706
nepalensis, *Lindl.* ... ... „ 693
nervosa, Lindl. ... ... vi. 182
? *nesophila*, Rchb. f. ... v. 703
obcordata, *Vahl* ... ... „ 707
obscura, *Hk. f.* ... v. 701, vi. 182
odontostoma, *Rchb. f.* ... v. 707
odorata, Lindl. ... ... „ 698
olivacea, *Lindl.* ... ... „ 694
olivacea, Wight ... ... „ 699
orbicularis, Lodd. ... ... „ 702
pachypus, *Par. & Rchb. f.* „ 700
paradoxa, *Rchb. f.* v. 697, vi. 181
Parishii, *Hk. f.* ... ... vi. 182
parviflora, Ridl. ... ... v. 704
pendula, Lindl. ... ... „ 703
perpusilla, *Hk. f.* ... ... „ 706
plantaginea, *Lindl.* ... ... „ 702
platyphylla, *Ridl.* ... ... „ 695
platyrachis, *Hk. f* ... ... „ 706
Prainii, *Hk. f.* ... ... „ 700
priochilus, Lodd ... ... „ 690
pulchella, *Hk. f.* ... ... „ 693
pusilla, *Ridl.* ... ... „ 701
reflexa, Lindl. ... ... vi. 183
resupinata, *Ridl.* v. 705, vi. 183
Ridleyi, *Hk. f.* ... ... v. 705
robusta, Hk. f. ... ... vi. 182
rostrata, *Rchb. f.* ... v. 694
rupestris, *Griff.* ... ... „ 692
rupestris, Ridl. ... ... „ 694
Scortechini, Hk. f. v. 703, vi. 182
selligera, Ridl. ... ... v. 702
serræformis, Lindl. ... ... vi. 41
spathulata, Lindl. ... ... v. 703
stachyurus, *Rchb. f.* ... „ 707
stenoglossa, *Par. & Rchb. f.* „ 697
Stricklandiana, *Rchb. f.* „ 707
tenuifolia, *Hk. f.* ... ... vi. 182
Thwaitesii, *Hk. f.* v. 692, vi. 181
torta, *Hk. f.* ... ... vi. 182
Trimenii, *Ridl.* ... ... v. 695
tristis, Lodd. ... ... „ 708
venosa, *Ridl.* ... ... „ 695
vestita, *Rchb. f.* ... ... „ 703
viridiflora, *Lindl.* ... ... „ 704
Walkeriæ, *Grah.* ... ... „ 698
Walkeriæ, Wight ... ... „ 699
Wightiana, *Thw.* ... v. 692, 695
Wightii, Rchb. f. ... ... v. 704

Liparis Vol. Page
Wrayii, *Hk. f.* ... ... vi. 181
zeylanica, Ridl. v. 708, vi. 183
Lipocarpha, *Br.* ... ... vi. 667
argentea, *Br.* ... ... „ 667
foliosa, Miq. ... ... „ 677
lævigata, Nees ... ... „ 667
microcephala, *Kunth* ... „ 668
microcephala, Hance ... „ 663
sphacelata, *Kunth* ... ... „ 667
triceps, Nees ... ... „ 667
Zollingeriana, Boeck. ... „ 668
sp., Wall. ... ... vi. 587, 602, 667
Lippaya telephioides, Endl. iii. 42
Lippia, *Linn.* ... ... iv. 563
geminata, *H. B. K.* ... ... „ 563
nodiflora, *Rich.* ... ... „ 563
Liquidambar Altingia, Bl. ... ii. 429
Altingiana, Bl. ... ... „ 429
tricuspis, Miq. ... ... „ 429
Liriodendron grandiflorum, Roxb. ... ... i. 41
liliifera, Roxb. ... ... „ 40
Liriope spicata, Lour. ... ... vi. 270
Lisianthus zeylanicus, Spreng. iv. 97
Listera, *Br.* ... ... vi. 103, 180
micrantha, *Lindl.* ... ... vi. 104
ovata, *Br.* ... ... „ 104
pinetorum, *Lindl.* ... ... „ 104
reniformis, D. Don ... ... „ 152
tenuis, *Lindl.* ... ... „ 104
Lithagrostis Lacryma-Jobi, Gærtn. ... ... vii. 100
Lithospermum, *Linn.* ... ... iv. 174
arvense, *Linn.* ... ... „ 174
dispermum, Linn. ... ... „ 166
echioides, Benth. ... ... „ 170
elongatum, Dcne. ... ... „ 170
euchromon, Royle ... ... „ 177
heliotropoides, Forsk. ... „ 149
hispidissimum, Lehm. ... „ 176
hispidum, Forsk. ... ... „ 150
leucophlæum, Schweinf. ... „ 152
moltkioides, Dcne. ... ... „ 170
officinale, *Linn.* ... ... „ 175
ovalifolium, Dcne. ... ... „ 171
retortum, Pallas ... ... „ 166
secundiflorum, Dcne. ... „ 170
tenuiflorum, *Linn. f.* ... „ 175
vestitum, Wall. ... ... „ 176
viridiflorum, Roxb. ... ... „ 146
Litsæa, *Lamk.* ... ... v. 155
albicans, *Hk. f.* ... ... „ 171
amara, *Bl.* ... ... „ 163
ambigua, Meissn. ... ... „ 153
angustifolia, *Hk. f.* ... ... „ 169
angustifolia, Kurz ... ... „ 152
assamica, *Hk. f.* ... ... „ 161

Litsæa Vol. Page
Beddomei, *Hk. f.* ... ... v. 177
Blumii, *Hk. f.* (vide Tetranthera) ... ... „ 160
castanea, *Hk. f.* ... ... „ 171
cauliflora, Moon (vide Tetranthera)... ... ... „ 167
chartacea, *Wall.* ... ... „ 170
chinensis, Lamk. ... ... „ 158
citrata, *Bl.* ... ... „ 155
citrata, Herb. Calc. ... ... „ 156
consimilis, Nees ... ... „ 179
cordata, *Hk. f.* ... ... „ 177
coriacea, *Hk. f.* ... ... „ 166
? *Cuipala*, Nees... ... ... „ 178
elongata, *Benth. & Hk. f.* „ 165
ferruginea, Bl. ... ... „ 160
firma, *Hk. f.* ... ... „ 162
foliosa, Nees ... ... „ 178
furfuracea, Nees ... ... „ 178
fuscata, *Thw.* ... ... „ 178
Gardneri, *Meissn.* ... ... „ 176
geminata, Bl. ... ... „ 158
glaberrima, *Hk. f.* ... ... „ 173
glabraria, Juss. ... ... „ 158
glabrata, *Hk. f.* ... ... „ 174
gracilipes, *Hk. f.* ... ... „ 159
grandis, *Hk. f* ... ... „ 162
Helferi, *Hk. f.* ... ... „ 172
Hookeriana, *Hk. f.* ... ... „ 166
iteodaphne, *Thw.* ... ... „ 173
? *khasiana*, Meissn. ... ... „ 169
khasyana, *Hk. f.* ... ... „ 164
khasyana, Hb. Calc. ... „ 164
Kingii, *Hk. f.*... ... ... „ 156
Kurzii, *King* ... ... „ 164
læta, *Benth. & Hk. f.* ... „ 169
lævis, Juss. ... ... „ 158
lancifolia, *Hk. f.* ... ... „ 159
lanuginosa, *Nees* ... ... „ 178
leiantha, *Hk. f.* ... ... „ 170
leiantha (error for *leiophylla*) ... ... „ 154
leiophylla, *Hk. f.* ... ... „ 910
ligustrina, *Trim.* ... ... „ 158
longifolia, *Benth. & Hk. f.* „ 167
longipes, *Meissn.* ... ... „ 172
macrophylla, Kurz ... ... „ 151
Maingayi, *Hk. f.* ... ... „ 175
Mannii, *King* ... ... „ 180
martabanica, *Hk. f.* ... ... „ 164
Meissneri, *Hk. f.* ... ... „ 169
membranifolia, *Hk. f.* ... „ 159
mishmiensis, *Hk. f.* ... ... „ 161
monopetala, Pers. ... ... „ 162
multiflora, Bl. ... ... „ 158
myristicæfolia, *Hk. f.* ... „ 172
nemoralis, *Trim.* ... ... „ 167

Litsæa ... Vol. Page
nemoralis, Trim. ... v. 166
nitida, *Hk. f.* ... „ 174
nuculanea, *Hk. f.* ... „ 166
oblonga, *Wall.* ... „ 168
oblonga, Nees ... „ 178
obovata, Nees ... „ 153
oleoides, *Hk. f.* ... „ 175
orbicularis, Thw. ... „ 153
oreophila, *Hk. f.* ... „ 156
ovalifolia, *Trim.* ... „ 173
Panamonja, *Hk. f.* ... „ 175
penangiana, *Hk. f.* ... „ 171
petiolata, *Hk. f.* ... „ 171
platyphylla, Pers. ... „ 158
polyantha, *Juss.* ... „ 162
rangoonensis, *Hk. f.* ... „ 163
rugosa, Kurz ... „ 180
salicifolia, *Hk. f.* ... „ 167
scrobiculata, Meissn. ... „ 178
sebifera, *Pers.* ... v. 157, 158
semecarpifolia, *Hk. f.* ... v. 165
sericea, *Hk. f.* ... „ 156
sessiflora, *Hk. f.* ... „ 160
Stocksii, *Hk. f.* ... „ 176
striolata, Bl. ... „ 178
striolata, Meissn. ... „ 180
Tetranthera, Mirb. ... „ 158
Thomsonii, *Hk. f.* ... „ 170
tomentosa, *Heyne* ... „ 157
trinervia, Juss. ... „ 178
umbrosa, *Nees* ... „ 179
undulata, *Hk. f.* ... „ 158
velutina, Bl. ... „ 180
venulosa, *Hk. f.* ... „ 161
Wallichii, *Hk. f.* ... „ 160
Wightiana, *Benth. & Hk. f.* „ 177
zeylanica, *C. & T. Nees* ... „ 178
LITSEACEÆ ... v. 116
Livistona, *Br.* ... vi. 434
chinensis, Br. ... „ 434
cochinchinensis, *Mart.* ... „ 434
Diepenhorstii, Teysm. ... „ 436
Jenkinsiana, *Griff.* ... „ 435
Kingiana, *Becc.* ... „ 435
sinensis, Mart. ... „ 434
speciosa, *Kurz* ... „ 485
spectabilis, Griff. ... „ 435
Lloydia, *Salisb.* ... vi. 354
alpina, Salisb. ... „ 354
himalensis, Royle ... „ 354
kunawarensis, Royle ... „ 356
longiscapa, Hook ... „ 354
serotina, *Rchb.* ... „ 354
Lobbia dependens, Planch. ... v. 74
Lobelia, *Linn.* ... iii. 423
affinis, *Wall.* ... , 424
alata, Heyne ... „ 425

Lobelia Vol. Page
anceps, Linn. f. ... iii. 425
arenarioides, A. DC. ... „ 425
aromatica, Moon ... „ 427
begoniæfolia, Wall. ... „ 422
cæspitosa, Bl. ... „ 425
campanuloides, Thunb. ... „ 425
chenopodifolia, Wall. ... „ 423
chinensis, Lour. ... „ 423
Cliffortiana, Linn. ... „ 423
colorata, *Wall.* ... „ 426
decurrens, Roth ... „ 425
dichotoma, Miq. ... „ 425
dopatrioides, Kurz ... „ 424
erecta, *Hk. f. & T.* ... „ 426
excelsa, *Leschen.* ... „ 427
frutescens, Linn. ... „ 421
gratioloides, Roxb. ... „ 423
Griffithi, *Hk. f. & T* ... „ 424
Heyniana, R. & Sch. ... „ 425
hirta, Wight ... „ 424
Horsfieldiana, Miq. ... „ 422
Lobbiana, Hk. f. & T. ... „ 424
micrantha, Hook. ... „ 425
microcarpa, *Clarke* ... „ 424
mishmica, *Clarke* ... „ 426
montana, Reinw. ... „ 423
nicotianæfolia, *Heyne* ... „ 427
Nummularia, Lamk. ... „ 422
Plumieri, Burm. ... „ 421
Plumieri, Linn. ... „ 421
? *pumila*, A. DC. ... „ 428
purpurascens, Wall. ... „ 426
pyramidalis, *Wall.* ... „ 426
radicans, *Thunb.* ... „ 425
rosea, *Wall.* ... „ 427
Sebæ, A. DC. ... „ 425
stipularis, Roth ... „ 423
subcuneata, Miq. ... „ 424
subincisa, Wall. ... „ 425
subracemosa, Miq. ... „ 425
Taccada, Gaertn. ... „ 421
terminalis, *Clarke* ... „ 424
trialata, *Ham.* ... „ 425
triangulata, Roxb. ... „ 423
trichandra, Wight. ... „ 427
trigona, *Roxb.* ... „ 423
trigona, Hk. f. & T. ... „ 425
trigona, Roxb. ... „ 425
trigona, Thw. ... „ 425
umbrosa, Hochst. ... „ 425
Wallichiana, Hk. f. & T. ... „ 426
Wallichii, Steud. ... „ 426
zeylanica, *Linn.* ... „ 425
zeylanica, Wall ... „ 424
sp., Griff. ... „ 423
LOBELIEÆ ... iii. 422
Lobocarpus Candolleanus, W. & A. v. 316

Vol. Page
Lobophyllum tetrandrum, F. Muell. ... ... iv. 144
Lodicularia capensis, Nees vii. 153
  fasciculata, Beauv. ... ... " 153
  fastigiata, Beauv. ... ... " 153
  Hamiltoniana, Nees ... ... " 154
  laxa, Nees ... ... " 153
  peruviana, Meyen ... ... " 153
Lœflingia indica, Retz. ... i. 245
LOGANIACEÆ ... ... iv. 78
Lolium, *Linn.* ... ... vii. 364
  annuum, Lamk. ... ... " 364
  arvense, With. ... ... " 364
  coelorachis, Forst. ... ... " 365
  italicum, A. Br. ... ... " 364
  multiflorum, Lamk. ... ... " 364
  perenne, *Linn.* ... ... " 365
  rigidum, *Gaud.* ... ... " 364
  robustum, Rchb. ... ... " 364
  speciosum, Stev. ... ... " 364
  temulentum, *Linn.* ... ... " 364
  vulgare, Host ... ... " 365
Lomatogonium carinthiacum, A. Br. ... ... iv. 120
Lomatolepis, Cass. ... ... iii. 417
  glomerata, Cass. ... ... " 417
Lonchomera, *Hk. f. & T.* ... i. 93
  leptopoda, *Hk. f. & T.* ... " 94
Lonicera, *Linn.* ... ... iii. 9
  acuminata, *Wall.* ... ... " 10
  alpigena, *Linn.* ... ... " 15
  angustifolia, *Wall.* .. ... " 13
  asperifolia, *Hk. f. & T.* ... " 11
  bracteata, Royle ... ... " 11
  chinensis, Royle ... ... " 16
  confusa, Royle ... ... " 16
  confusa, DC. ... ... " 16
  decipiens, *Hk. f. & T.* ... " 14
  depressa, Royle ... ... " 13
  discolor, Lindl. ... ... " 15
  diversifolia, Wall. ... ... " 14
  elliptica, Royle ... ... " 14
  Finlaysoniana, Wall. ... " 16
  glabrata, *Wall.* ... ... " 10
  glauca, *Hk. f. & T.* ... ... " 11
  glaucophylla, Hk. f. & T. " 16
  Govaniana, Wall. ... ... " 15
  gracilis, Kurz ... ... " 16
  heterophylla, *Dcne.* ... " 15
  hispida, *Pall.* ... ... " 11
  hypoleuca, *Dcne.* ... ... " 14
  japonica, Linn. ... ... " 10
  japonica, Wall. ... ... " 10
  lanceolata, Wall. ... ... " 14
  Leschenaultii, *Wall.* ... " 10
  ligustrina, *Wall.* ... ... " 12
  longifolia, Royle ... ... " 16
Lonicera Vol. Page
  Loureirii, Hk. f. & T. ... iii. 10
  macrantha, *DC.* ... ... " 10
  microphylla, *Willd.* ... " 15
  mollis, Wight ... ... " 10
  Myrtillus, Hk. f. & T. ... " 13
  obovata, *Royle* ... ... " 14
  orientalis, *Lamk.* ... ... " 15
  ovata, *Ham.* ... ... " 11
  oxyphylla, Edgew. ... ... " 16
  parvifolia, *Edgew.* ... ... " 13
  purpurascens, *Hk. f. & T.* " 12
  quinquelocularis, *Hardw.* " 14
  Royleana, Wall. ... ... " 14
  rupicola, *Hk. f. & T.* ... " 13
  sericea, Royle ... ... " 12
  Sieversiana, Bunge ... ... " 15
  spinosa, *Jacquem.* ... ... " 13
  stipulata, Hk. f. & T. ... " 17
  tomentella, *Hk. f. & T.* ... " 12
  Webbiana, Wall. ... ... " 16
  Wightiana, Wall. ... ... " 12
  sp., Griff. ... ... " 11
LONICEREÆ ... ... iii. 1
Lontanus domestica, Rumph. vi. 482
Lophatherum, *Brongn.* ... vii. 331
  dubium, Steud. ... ... " 331
  elatum, Zoll. & Mor. ... " 331
  gracile, *Brongn.* ... ... " 331
  japonicum, Steud. ... ... " 331
  Lehmanni, Nees ... ... " 331
  multiflorum, Steud. ... " 331
Lophiocarpus guayanensis, Mich. ... ... vi. 561
Lophocolea, Rchb. ... ... vii. 309
  phleoides, Rchb. ... ... " 309
Lopholepis, *Dcne.* ... ... vii. 98
  ornithocephala, *Steud.* ... " 98
Lophopetalum, *Wight* ... i. 614
  celastroides, *Laws.* ... " 615
  dubium, *Laws.* ... ... " 616
  filiforme, *Laws.* ... ... " 616
  fimbriatum, *Wight* ... ... " 615
  floribundum, *Wight* ... " 616
  grandiflorum, Arn. ... ... " 608
  javanum, Turcz. ... ... " 615
  lucidum, Wight ... ... " 608
  ovatum, Presl ... ... " 615
  pallidum, *Laws.* ... ... " 615
  reflexum, *Laws.* ... ... " 616
  Wallichii, *Kurz* ... ... " 615
  Wightianum, *Arn.* ... ... " 615
Lophophyllum, *Griff.* ... i. 105
  bicristatum, *Griff.* i. 105, 595
Lophopogon, *Hack.* ... ... vii. 149
  Kingii, *Hk. f.* ... ... " 149
  tridentatus, *Hack.* ... ... " 149
  sp., Wall. ... ... " 149

Vol. Page
Lophopyxis, *Hk. f.* ... ... v. 476
Maingayi, *Hk. f.* ... ... „ 476
Lophostylis javanica, Miq. ... i. 208
LORANTHACEÆ ... ... v. 203
Loranthus, *Linn.* ... ... v. 203
albidus, *Bl.* ... ... „ 222
amplexicaulis, Wall. ... „ 215
amplexifolius, DC. ... ... „ 215
ampullaceus, *Roxb.* ... „ 220
ampullaceus, Wall. ... ... „ 221
Arnottianus, Korth. ... „ 222
Arnottianus, Wight ... „ 207
exanthus, Korth. ... ... „ 204
bicolor, Roxb. ... ... „ 215
biflorus, Desr. ... ... „ 222
Blumeanus, Wight ... ... „ 205
bracteatus, *Heyne* ... ... „ 213
bracteatus, DC. ... ... „ 212
Brandisianus, *Kurz* ... „ 219
buddleioides, Desr. ... ... „ 209
buddleioides, Thw. ... ... „ 209
Candolleanus, Hoh. ... „ 213
Candolleanus, W. & A. ... „ 214
capitellatus, *W. & A.* ... „ 221
carinatulus, Wall. ... ... „ 220
carnosus, Wall. ... ... „ 211
carnosus, Wight ... ... „ 217
cinnamomeus, Wall. ... „ 209
? *clavatus*, Roxb. ... ... „ 212
clavigerus, Wall. ... ... „ 212
coccineus, *Jack* ... ... „ 206
coccineus, Hook. ... ... „ 205
concavifolius, Griff. ... „ 209
contractus, Wall. ... ... „ 216
cordifolius, Wall. ... ... „ 209
coriaceus, Desr. ... ... „ 222
Corynitis, Spreng. ... ... „ 212
crassus, *Hk. f.* ... ... „ 217
cuneatus, *Heyne* ... ... „ 214
cuneatus, Wall. ... ... „ 210
elasticus, *Desr.* ... ... „ 216
elatus, *Edgew.* ... ... „ 212
elegans, *Wall.* ... ... „ 215
eleutheropetalus, Kurz ... „ 208
ensifolius, *Thw.* ... ... „ 206
erythrostachyus, Wall. v. 206, 223
Euphorbiæ, Wight ... ... v. 216
falcatus, Linn. f. ... ... „ 215
farinosus, Desr. ... ... „ 216
ferrugineus, *Roxb.* ... ... „ 210
Finlaysonianus, Wall. ... „ 216
? *firmus*, Wall. ... ... „ 222
formosus, *Bl.* ... ... „ 220
? *fuscus*, Bl. ... ... „ 210
Gardneri, *Thw.* ... ... „ 218
globosus, *Roxb.* ... ... „ 220
goodeniæflorus, DC. ... ... „ 214

Loranthus Vol. Page
graciliflorus, Wall. ... ... v. 209
heteranthus, Wall. ... ... „ 208
hexapetalus, Ham. ... ... „ 204
Heyneanus, Schult. ... ... „ 213
Heyneanus, Wall. ... ... „ 209
Heynii, DC. ... ... „ 209
Hookerianus, *W. & A.* ... „ 207
hypoglaucus, *Kurz* ... „ 220
imbricatus, Edgew. ... „ 215
intermedius, *Wight* ... „ 205
involucratus, *Roxb.* ... „ 218
Kanneli, Schult. ... ... „ 223
Koenigianus, Agardh ... „ 215
lævigatus, Wall. ... ... „ 209
lageniferus, *Wight* ... ... „ 218
Lambertianus, Schult. ... „ 223
leptanthus, DC. ... ... „ 211
leptanthus, Wall. ... ... „ 211
leucosiphon, Griff. ... ... „ 222
? ligulatus, *Thw.* ... ... „ 214
ligustrinus, *Wall.* ... ... „ 207
ligustrinus, Hk. f. & T. ... „ 208
lineatus, Edgew. ... ... „ 215
Lobbii, *Hk. f.* ... ... „ 204
lobeliæflorus, DC. ... ... „ 214
lonchiphyllus, *Thw.* ... „ 215
longiflorus, *Desr.* ... ... „ 214
loniceroides, *Linn.* ... ... „ 221
macrophyllus, Zenk. ... „ 221
Maingayi, *Hk. f.* ... ... „ 222
malaccensis, *Hk. f.* ... ... „ 210
memecylifolius, *W. & A.* „ 217
Mitchelii, Wall. ... ... „ 223
montanus, Wight ... ... „ 214
neelgherrensis, *W. & A.* „ 216
nodiflorus, *Thw.* ... ... „ 204
obovatus, *Griff.* ... ... „ 223
obovatus, Bl. ... ... „ 209
obtectus, Wall. ... ... „ 209
obtusatus, *Wall.* ... ... „ 205
odoratus, *Wall.* ... ... „ 204
oleifolius, Wall. ... ... „ 221
oleoides, DC. ... ... „ 220
Oortianus, Korth. ... ... „ 210
pallens, Wall. ... ... „ 220
Parishii, *Hk. f.* ... ... „ 205
pentandrus, *Linn.* ... v. 216, 223
pentapetalus, *Roxb.* „ 206, 223
polycarpus, Wall. ... ... v. 206
polystachyus, Wall. ... ... „ 205
psilanthus, *Hk. f.* ... ... „ 222
pulcher, *DC.* ... ... „ 205
pulverulentus, *Wall.* ... „ 211
puniceus, Wall. ... ... „ 223
pyrifolius, Wall. ... ... „ 209
racemiferus, Wall. ... ... „ 206
recurvus, *Wall.* ... v. 213, 223

Loranthus Vol. Page
repandus, Bl. ... v. 209
retusus, *Jack* ... „ 219
retusus, Wall. ... „ 217
rhopalocarpus, *Kurz* ... „ 210
rigidus, Wall. ... „ 216
rufidulus, Wall. ... „ 209
rugulosus, Heyne ... „ 223
sarcophyllus, *Wall.* ... „ 217
Schultesii, Bl. ... „ 210
sclerophyllus, *Thw.* ... „ 214
Scurrula, *Linn.* ... „ 208
Scurrula, DC. ... „ 209
serrulatus, Roxb. ... „ 223
siamensis, Kurz ... „ 223
speciosus, Wall. ... „ 205
sphærocarpus, Bl. ... „ 221
sphenoideus, Bl. ... „ 209
Stocksii, *Hk. f.* ... „ 213
subglobosus, Wall. ... „ 220
suborbicularis, *Thw.* ... „ 214
terrestris, *Hk. f.* ... „ 207
terrestris, Heyne ... „ 205
tetrandrus, Heyne ... „ 205
thelocarpus, *Hk. f.* ... „ 211
tomentosus, *Heyne* ... „ 212
tomentosus, Wight ... „ 213
trigonus, *W. & A.* ... „ 219
turbinatus, DC. ... „ 223
umbellatus, Heyne ... „ 221
umbellatus, Wall. ... „ 211
umbellifer, *Schultz* ... „ 211
umbellifer, Brand. ... „ 212
vestitus, *Wall.* ... „ 212
viridiflorus, Wall. ... „ 221
viscifolius ? Wight ... „ 223
Wallichianus, *Schultz* ... „ 204
Wightianus, Wall. ... „ 215
Wightii, *Hk. f.* ... „ 207
sp., Hk. f. & T. v. 209, 211, 213, 222
Loropetalum, *Br.* ... ii. 428
chinense, *Oliv.* ... „ 428
LOTEÆ ... ii. 57
Lotononis, *DC.* ... ii. 64
Leobordea, *Benth.* ... „ 64
Lotus, *Linn.* ... ii. 91
bracteatus, Wall. ... „ 91
corniculatus, *Linn.* ... „ 91
? Garcini, *DC.* ... „ 91
indicus, Desv. ... „ 63
major, Scop. ... „ 91
Stocksii, Boiss. ... „ 91
Loudetia barbata, A. Br. ... vii. 272
Lourea, *Neck.* ... ii. 154
campanulata, *Benth.* ... „ 155
microphylla, Wall. ... „ 154
obcordata, *Desv.* ... „ 154
paniculata, *Wall.* ... „ 154
Lourea Vol. Page
reniformis, DC. ... ii. 154
Vespertilionis, *Desv.* ... „ 154
Lowia, *Scort.* ... vi. 263
longiflora, *Scort.* ... „ 264
Loxanthus Gomezii, Nees iv. 511, 514
Loxocarpus, Br. ... iv. 352
alata, Br. ... „ 352
Loxococcus, *H. Wendl. & Dr.* vi. 413
rupicola, *H. Wendl. & Dr.* „ 413
Loxonia ? alata, Wall. ... iv. 352
? decurrens, Bl. ... „ 370
Loxostemon, *Hk. f. & T.* ... i. 139
pulchellus, *Hk. f. & T.* ... „ 139
Loxostigma, *Clarke* ... iv. 344
Griffithii, *Clarke* ... „ 344
Loxotis intermedia, Benth. iv. 367
obliqua, Benth. ... „ 367
obliqua, Br. ... „ 367
Lucæa ciliata, Steud. ... vii. 146
gracilis, Kunth ... „ 146
Langsdorffiana, Steud. ... „ 146
major, Steud ... „ 146
plumbea, Steud. ... „ 146
Schimperi, Steud. ... „ 147
violacea, Steud. ... „ 146
Lucinæa, *DC.* ... iii. 93
Morinda, *DC.* ... „ 93
Luculia, *Sweet* ... iii. 36
gratissima, *Sweet* ... „ 36
gratissima, Wall. ... „ 37
Pinceana, *Hook.* ... „ 37
Ludia fœtida, Roxb. i. 192, ii. 598
spinosa, Roxb. ... i. 190
Ludisia discolor, Lindl. ... vi. 101
Ludolfia glaucescens, Willd. vii. 391
Ludwigia, *Linn.* ... ii. 588
diffusa, Ham. ... „ 588
fruticulosa, Bl. ... „ 588
jussiæoides, Wall. ... „ 588
lythroides, Bl. ... „ 588
parviflora, *Roxb.* ... „ 588
prostrata, *Roxb.* ... „ 588
Luffa, *Cav.* ... ii. 614
acutangula, *Roxb.* ... „ 615
acutangula, W. & A. ... „ 614
ægyptiaca, *Mill.* ... „ 614
amara, Roxb. ... „ 615
amara, Wall. ... „ 618
Bendaul (*Bindaal*), Roxb. „ 615
Cattu-picinna, Ser. ... „ 614
clavata, Roxb. ... „ 614
cylindrica, Roem. ... „ 614
echinata, *Roxb.* ... „ 615
Goza, Wall. ... „ 614
graveolens, *Roxb.* ... „ 614
hederacea, Wall. ... „ 614
Kleinii, *W. & A.* ... „ 616

Luffa Vol. Page
longistylis, Edgew. ... ... ii. 615
Parvala, Wall. ... ... „ 614
pentandra, Roxb. ... ... „ 614
Petola, Ser. ... ... „ 614
Plukenetiana, DC. ... ... „ 615
racemosa, Roxb. ... ... „ 614
Satpatia, Wall. ... ... „ 614
tuberosa, Roxb. ... ... , 618
umbellata, Roem. ... ... „ 616
Luisia, *Gaud.* ... ... vi. 22, 178
alpina, Lindl. ... ... vi. 53
antennifera, *Bl.* ... ... „ 25
bicaudata, Thw. ... ... „ 26
Birchea, Bl. ... ... „ 24
brachystachys, *Bl.* ... ... „ 23
burmanica, Lindl. ... ... „ 22
filiformis, *Hk. f.* ... ... „ 23
Grovesii, *Hk. f.* ... ... „ 25
macrotis, *Rchb. f.* ... ... „ 24
micrantha, *Hk. f.* ... ... „ 23
microptera, *Rchb. f.* ... ... „ 25
platyglossa, Rchb. f. ... ... „ 22
primulina, *Par. & Rchb. f.* „ 24
Psyche, *Rchb. f.* ... ... „ 24
retusa, Rchb. f. ... ... „ 23
tenuifolia, *Bl.* ... ... „ 24
teretifolia, *Gaud.* ... ... „ 22
teretifolia, Rchb. f. .. .. „ 23
trichorhiza, *Bl.* ... ... „ 23
trichorhiza, Lindl. ... ... „ 23
tristis, *Hk.* f. ... ... „ 25
uniflora, Bl. ... ... „ 44
volucris, *Lindl.*... ... ... „ 25
zeylanica, Lindl. ... ... „ 22
zeylanica, Thw. ... ... „ 24
Lumnitzera, *Willd.* ... ... ii. 451
coccinea, *W. & A.* ... ... „ 452
littorea, Voigt ... ... „ 452
pentandra, Griff. ... ... „ 452
racemosa, *Willd.* ... ... „ 452
Lumnitzera, Jacq. ... ... iv. 610
capitata, Spreng. ... ... „ 611
fastigiata, Spreng. ... ... „ 656
prostrata, Spreng. ... ... „ 610
rubicunda, Spreng. ... ... „ 615
virgata, Spreng. ... ... „ 615
Lupinus cochinchinensis, Lour. ii. 75
trifoliatus, Cav. ... ... „ 92
trifoliatus, Rottl. ... ... „ 82
Luvunga, *Ham.* ... ... i. 508
eleutherandra, *Dalz.* ... ... „ 509
eleutherandra, Thw. ... ... „ 509
scandens, *Ham.* ... ... „ 509
scandens, Thw.... ... ... „ 509
tavoyana, Lindl. ... ... „ 509
Luzula, *DC.* ... ... vi. 401
campestris, *DC.* ... ... „ 401

Luzula Vol. Page
effusa, *Buchen.* ... ... vi. 401
Forsteri, Hk. f. & T. ... „ 401
pilosa, Willd. ... ... „ 401
plumosa, *E. Meyer* ... ... „ 401
spicata, *DC.* ... ... „ 401
Lyama, Roxb. ... ... iii. 669
Lychnis, *Linn.* ... ... i. 222
apetala, *Linn.* ... ... „ 222
brachypetala, *Hort. Berol.* „ 223
cachemeriana, *Royle* ... „ 224
cancellata, *Jacq.* ... ... „ 226
ciliata, Wall. ... ... „ 225
coronaria, *Lamk.* ... ... „ 222
cuneifolia, *Royle* ... ... „ 226
eriostemon, Wall. ... . „ 225
Falconeri, Rohrb. ... ... „ 223
fimbriata, Wall. ... ... „ 225
himalayensis, *Edgew.* ... „ 223
indica, *Benth.* ... ... „ 225
inflata, *Wall.* ... ... „ 225
macrorhiza, *Royle* ... ... „ 223
madens, Jacquem. ... ... „ 223
multicaulis, *Wall.* ... ... „ 224
nigrescens, *Edgew.* ... ... „ 223
nutans, *Benth.* ... ... „ 225
nutans, Royle ... ... „ 224
pilosa, *Edgew.* ... ... „ 226
pumila, Royle ... ... „ 226
Stewartii, *Edgew.* ... ... „ 224
tristis, Hk. f. & T. ... ... „ 223
LYCHNIDEÆ ... ... i. 213
Lycium, *Linn.* ... ... iv. 240
arabicum, Schweinf. ... „ 241
armatum, Griff. ... ... „ 241
barbarum, *Linn.* ... ... „ 241
depressum, Stocks ... ... „ 241
Edgeworthii, Dunal ... ... „ 241
europæum, *Linn.* ... ... „ 240
foliosum, Stocks ... ... „ 241
glaucum, Miers ... ... „ 241
indicum, Wight ... ... „ 240
intricatum, Boiss. ... ... „ 241
mediterraneum, Dunal ... „ 240
orientale, Miers ... ... „ 240
persicum, Miers ... ... „ 240
ruthenicum, *Murray* ... „ 241
sævum, Miers ... ... „ 240
tataricum, Pall. ... ... „ 241
turcomannicum, Turcz. ... „ 241
Lycopersicum, *Miller* ... iv. 237
cerasiforme, Dunal ... ... „ 237
esculentum, *Miller* ... ... „ 237
Lycopsis, *Linn.* ... ... iv. 168
arvensis, *Linn.* ... ... „ 168
pulla, Linn. ... ... „ 169
Lycopus, *Tourn.* ... ... iv. 648
dianthera, Ham. ... ... „ 647

Lycopus Vol. Page
europæus, *Linn.* ... ... iv. 648
exaltatus, Linn. ... ... „ 648
Lygia Passerina, **Fasan.** ... v. 194
Lygisma, *Hk. f.* ... ... iv. 39
angustifolia, *Hk. f.* ... ... „ 39
Lysimachia, *Linn.* ... ... iii. 501
acroadenia, Maxim. ... „ 502
alata, Gard. ... ... „ 504
alternifolia, *Wall.* ... ... „ 504
candida, Lindl. ... ... „ 502
chenopodioides, *Watt* ... „ 503
Clementsoniana, Wall. ... „ 502
consobrina, Hance ... ... „ 502
debilis, Wall. ... ... „ 505
decurrens, Hance ... ... „ 502
deltoides, *Wight* ... ... „ 505
evalvis, *Wall.* ... ... „ 504
ferruginea, Edgew. ... ... „ 505
Fœnum-græcum, Hance ... „ 504
glandulosa, Edgew. ... ... „ 504
glandulosa, Klatt ... ... „ 503
glaucescens, Wall. ... ... „ 502
heterophylla, D. Don ... „ 503
japonica, *Thunb.* ... ... „ 505
japonica, Thw. ... ... „ 505
javanica, *Bl.* ... ... „ 502
Leschenaultii, *Duby* ... „ 501
linearifolia, *Griff.* ... ... „ 504
lobelioides, *Wall.* ... ... „ 502
Metziana, Hohen. ... ... „ 505
multiflora, Wall. ... ... „ 502
Notoniana, Wall. ... ... „ 502
obovata, *Ham.* ... ... „ 502
peduncularis, *Wall.* ... „ 504
prolifera, *Klatt* ... ... „ 503
pyramidalis, *Wall.* ... ... „ 503
quinquangularis, Ham. ... „ 504
ramosa, *Wall.* ... ... „ 503
secunda, Ham. ... ... „ 502
tenella, Wall. ... ... „ 506
tetragona, D. Don ... ... „ 504
umbrosa, Gardn. ... ... „ 505
LYSIMACHIEÆ ... ... iii. 482
Lysionotus, *D. Don* ... ... iv. 343
conferta, *Clarke* ... ... „ 344
serrata, *D. Don* ... ... „ 344
ternifolia, Wall. ... ... „ 344
Lysistemma dendigulense, Steetz iii. 238
divergens, Steetz ... ... „ 234
multiflorum, Steetz ... ... „ 234
pectiniforme, Steetz ... „ 239
LYTHREÆ ... ... ii. 565
LYTHRACEÆ ... ... ii. 565
Lythrum fruticosum, Linn. ii. 572
Pemphis, Linn. f. ... ... „ 573

Maba, *J. & G. Forst.* ... ... iii. 550
Maba Vol. Page
acuminata, *Hiern* ... ... iii. 550
andamanica, *Kurz* ... ... „ 551
buxifolia, *Pers.* ... ... „ 551
Cumingiana, A. DC. ... „ 551
Ebenus, Wight ... ... „ 551
guineensis, A. DC. ... ... „ 551
littorea, Br. ... ... „ 551
madagascariensis, A. DC. „ 551
Maingayi, *Hiern* ... ... „ 552
merguensis, *Hiern* ... ... „ 552
micrantha, *Hiern* ... ... „ 552
neilgherrensis, Wight ... „ 551
nigrescens, *Dalz.* ... ... „ 551
oblongifolia, *Hiern* ... ... „ 550
ovalifolia, *Hiern* ... ... „ 551
Smeathmanni, A. DC. ... „ 551
sp., Wall. ... ... „ 551
Macaranga, *Thouars* ... ... v. 445
borneensis, Muell. ... ... „ 450
Brandisii, *King* ... ... „ 453
Curtisii, *Hk. f.* ... ... „ 448
denticulata, *Muell.* ... ... „ 446
depressa, Muell. ... ... „ 454
digyna, *Muell.* ... ... „ 453
flexuosa, Wight ... ... „ 446
Gamblei, *Hk. f.* ... ... „ 445
gigantea, Muell. ... ... „ 449
gmelinæfolia, *King* ... ... „ 445
Griffithiana, *Muell.* ... ... „ 452
gummiflora, Muell. ... ... „ 446
Helferi, Muell. ... ... „ 450
Hosei, *King* ... ... „ 449
Hullettii, *King* ... ... „ 452
hypoleuca, *Muell.* ... ... „ 448
indica, *Wight* ... ... v. 424, 446
involucrata, Muell. ... ... v. 454
javanica, *Muell.* ... v. 451, 454
Kingii, *Hk. f.* ... ... v. 451
Lowii, *King* ... ... „ 453
Maingayi, *Hk. f.* ... ... „ 449
megalophylla, *Muell.* ... „ 449
membranacea, *Kurz* ... „ 454
minutiflora, *Muell.* ... ... „ 450
molliuscula, Kurz ... ... „ 447
perakensis, *Hk. f.* ... ... „ 447
populifolia, *Muell.* ... ... „ 450
pustulata, *King* ... ... „ 445
Roxburghii, *Wight* ... ... „ 448
rugosa, Muell. ... ... „ 449
Tanarius, *Muell.* ... ... „ 447
tomentosa, Wight ... ... „ 448
trichocarpa, *Muell.* ... „ 450
triloba, *Muell.* ... ... „ 452
Wightiana, Baill. .. ... „ 448
sp., Hk. f. & T. ... ... „ 454
Macclellandia Griffithiana, Wight ... ... ii. 573

Vol. Page
Machærina, Vahl ... vi. 674
  restioides, Vahl ... „ 674
Macharisia icosandra, Planch. i. 416
Machilus, *Nees* ... v. 136, 859
  bombycina, *King* ... v. 861
  bootanica, *Meissn.* ... v. 138, 861
  Clarkeana, *King* ... „ 137, 860
  Duthiei, *King* ... v. 861
  edulis, *King* ... v. 138, 860
  fruticosa, *Kurz* ... „ 140, 861
  Gamblei, *King* ... „ 138, 860
  Gammieana, *King* ... „ 137, 860
  glaucescens, Wight ... v. 141
  incrassata, Nees ... „ 126
  indica, Kurz ... „ 139
  ? **khasyana**, *Meissn.* v. 137, 861
  Kingii, *Hk. f.* ... v. 861
  Kurzii, *King* ... „ 860
  Listeri, *King* ... v. 138, 860
  macrantha, *Nees* ... „ 140, 861
  odoratissima, *Nees* ... „ 139, 859
  odoratissima, Wall. ... v. 861
  parviflora, *Meissn.* ... v. 137, 860
  peduncularis, Nees ... v. 144
  pubescens, Bl. ... „ 862
  rimosa, *Bl.* ... v. 139, 861
  sericea, *Bl.* ... „ 139, 861
  tavoyana, Meissn. ... v. 143
  villosa, *Hk. f.* ... v. 140, 860
  sp. ... v. 862
Mackaya populifolia, Arn. i. 578
Mackenziea sessilis, Nees ... iv. 474
Macklottia amboinensis, Korth. ... ii. 464
  javanica, Korth. ... „ 464
Maclura amboinensis, Bl. ... v. 538
  javanica, Bl. ... „ 538
  javanica, Miq. ... „ 538
  timorensis, Bl. ... „ 538
Macraea Gardneriana, Wight v. 296
  myrtifolia, Wight ... „ 296
  oblongifolia, Wight ... „ 295
  ovalifolia, Wight ... „ 296
  Rheedii, Wight ... „ 296
Macreightia acuminata, Thw. iii. 550
  andamanica, Kurz ... „ 551
  oblongifolia, Kurz ... „ 551
  oblongifolia, Thw. ... „ 550
  ovalifolia, Thw. ... „ 551
Macrocapnos scandens, Royle i. 121
Macrocladus sylvicola, Griff. vi. 423
Macrocnemum strictum, Willd. ... iii. 121
Macrolinum trigynum, Rchb. i. 412
Macrolobium bijugum, Coleb. ii. 275
Macrolomia bracteata, Nees vi. 694
Macronyx strigosus, Dalz. ... ii. 111

Vol. Page
Macropanax, *Miq.* ... ii. 738
  floribundum, Miq. ... „ 738
  glomerulatum, Miq. ... „ 737
  oreophilum, *Miq.* ... „ 738
  undulatum, *Seem.* ... „ 738
Macrophthalma elastica, Gasp. ... v. 508
Macrosolen formosus, Miq. ... v. 220
  oleoides, Miq. ... „ 221
  ? *pallens*, Miq. ... „ 220
  retusus, Miq. ... „ 219
  sphærocarpus, Miq. ... „ 221
Macrostigma tupistroides, Kunth ... vi. 325
Macrostomium aloefolium, Bl. v. 723
Macrostylis disticha, Breda ... vi. 91
Macrotomia, *DC.* ... iv. 176
  Benthami, *DC.* ... „ 177
  cyanochroa, Benth. ... „ 177
  endochroma, Hk. f. & T. ... „ 177
  onosmoides, Regel & Smirnow ... „ 177
  perennis, *Boiss.* ... „ 177
Macrotropis bancana, Miq. ... ii. 254
  sumatrana, Miq. ... „ 253
Madacarpus belgaumensis, Wight ... iii. 348
Madaractis arachnoidea, Hb. Calc. ... iii. 347
  glabra, DC. ... „ 344
  lanuginosa, Edgew. ... „ 346
  Metziana, Schultz. ... „ 344
  pinnatifida, DC. ... „ 345
  polycephala, DC. ... „ 344
  scabra, DC. ... „ 345
Maddenia, *Hk. f. & T.* ... ii. 317
  himalaica, *Hk. f. & T.* ... „ 318
  pedicellata, *Hk. f.* ... „ 318
Mærua, *Forsk.* ... i. 171
  arenaria, *Hk. f. & T.* ... „ 171
  oblongifolia, A. Rich. ... „ 171
  ovalifolia, Camb. ... „ 171
  scabra, Camb. ... „ 171
Mæsa, *Forsk.* ... iii. 507
  acuminata, A. DC. ... „ 508
  acuminata, Wall. ... „ 511
  andamanica, *Kurz* ... „ 508
  argentea, *Wall.* ... „ 510
  canarana, Miq. ... „ 510
  Chisia, *D. Don* ... „ 509
  coriacea, Champ. ... „ 508
  dioica, A. DC. ... „ 509
  dubia, *Wall.* ... „ 510
  fulvinervis, A. DC. ... „ 510
  glabra, A. DC. ... „ 508
  indica, *Wall.* ... „ 509
  lanceolata, G. Don ... „ 508

Mæsa Vol. Page
latifolia, A. DC. ... iii. 509
macrophylla, *Wall.* ... „ 510
missionis, A. DC. ... „ 508
mollis, *A. DC.* ... „ 510
mollissima, Kurz ... „ 510
mollissima, Wall. ... „ 510
montana, A. DC. ... „ 509
muscosa, *Kurz* ... „ 511
ovata, A. DC. ... „ 508
paniculata, *A. DC.* ... „ 509
permollis, Kurz ... „ 510
Perrottetiana, A. DC. ... „ 509
pyrifolia, Miq. ... „ 509
ramentacea, *A. DC.* ... „ 508
rugosa, *Clarke* ... „ 508
sumatrana, Scheff. ... „ 508
tomentosa, D. Don ... „ 510
verrucosa, Kurz ... „ 508
virgata, A. DC. ... „ 509
MÆSEÆ ... iii. 507
Magnolia, *Linn.* ... i. 41
Campbellii, *Hk. f. & T.* ... „ 41
excelsa, Wall. ... „ 43
globosa, *Hk. f. & T.* ... „ 41
Griffithii, *Hk. f. & T.* ... „ 41
insignis, Wall. ... „ 42
punduana, Wall. ... „ 43
sphenocarpa (error for pterocarpa), *Roxb.* ... „ 41
MAGNOLIACEÆ ... i. 38
MAGNOLIEÆ ... i. 39
Maharanga bicolor, A. DC. iv. 179
Emodi, A. DC. ... „ 170
Wallichiana, A. DC. ... „ 179
Mahonia nepalensis, DC. ... i. 109
Mahwah or *Madhuea*, Ham. iii. 544
Maingaya, *Oliv.* ... ii. 428
malayana, *Oliv.* ... „ 428
Malachium aquaticum, Fries i. 229
Malachra, *Linn.* ... i. 329
capitata, *Linn.* ... „ 329
Malacochæte littoralis, Nees vi. 659
pectinata, Nees ... „ 659
? *Malaisia tortuosa*, Kurz ... v. 490
Malaspinæa laurifolia, Presl iii. 533
Malaxis acuminata, D. Don v. 686
anceps, Rchb. f. ... „ 685
angustifolia, Rchb. f. ... „ 684
anthropophora, Rchb. f. ... „ 684
bicornis, Rchb. f. ... „ 682
brachystachys, Rchb. f. ... „ 677
Brunoniana, Rchb. f. ... „ 681
caulescens, Rchb. f. ... „ 683
cernua, Willd. ... vi. 17
cimicina, Rchb. f. ... v. 676
compressa, Bl. ... „ 706
cordifolia, Sm. ... „ 693
Malaxis Vol. Page
decurrens, Bl. ... v. 706
demissa, Rchb. f. ... „ 680
disticha, Thouars ... „ 706
ensiformis, Sm. ... „ 679
forcipata, Rchb. f. ... „ 681
Griffithiana, Rchb. f. ... „ 676
iridifolia, Rchb. f. ... „ 675
Jenkinsiana, Rchb. f. ... „ 676
lancifolia, Sm. ... „ 698
latifolia, Bl. ... vi. 182
latifolia, Sm. ... v. 690
Lindleyana, Rchb. f. ... „ 682
longebracteata, Rchb. f. ... „ 679
lunata, Bl. ... vi. 180
miniata, Rchb. f. ... v. 685
mucronata, Bl. ... „ 706
Myosurus, Walp. ... „ 685
myriantha, Rchb. f. ... „ 680
nervosa, Sw. ... vi. 182
nutans, Willd. ... „ 16
obcordata, Rchb. f. ... v. 684
odorata, Willd. ... „ 698
platycaulon, Rchb. f. ... „ 682
plicata, Roxb. ... „ 690
pyrulifera, Rchb. f. ... „ 678
recurva, Rchb. f. ... „ 680
Rheedii, Heyne ... „ 690
Rheedii, Sw. ... „ 688
rufilabris, Rchb. f. ... „ 683
Scyllæ, Rchb. f. ... „ 685
setifera, Rchb. f. ... „ 680
sikkimensis, Rchb. f. ... „ 680
tenuis, Rchb. f. ... „ 682
truncata, Rchb. f. ... „ 677
verticillata, Rchb. f. ... „ 678
viridiflorá, Bl. ... „ 704
Wightiana, Rchb. f. ... „ 683
Malcolmia, *Br.* ... i. 146
africana, *Br.* ... „ 146
stenopetala, Ledeb. ... „ 146
stricta, Camb. ... „ 149
strigosa, *Boiss.* ... „ 146
torulosa, *Boiss.* ... „ 146
Mallea integerrima, Wall. i. 545
Rothii, Juss. ... „ 545
subscandens, Teysm. & Binn. ... „ 545
Mallica, Jones ... iii. 591
Mallotus, *Lour.* ... v. 427
acuminatus, *Muell.* ... „ 431
? *acuminatus*, Kurz ... „ 431
albus, *Muell.* ... „ 429
amentiformis, Muell. ... „ 432
andamanicus, *Hk. f.* ... „ 439
anisophyllus, *Hk. f.* ... „ 436
Apelta, Muell. ... „ 424
atrovirens, *Muell.* ... „ 440

- Mallotus — Vol. Page
  - *aureo-punctatus*, Muell. v. 438
  - **barbatus**, *Muell.* ,, 428
  - **Beddomei**, *Hk. f.* ,, 438
  - **bracteatus**, *Hk. f.* ,, 436
  - **? Caput-Medusæ**, *Hk. f.* ,, 443
  - **Clellandii**, *Hk. f.* ,, 435
  - **cochinchinensis**, *Lour.* ,, 430
  - **decipiens**, *Muell.* ,, 434
  - **distans**, *Muell.* ,, 441
  - *eriocarpoides*, Muell. ,, 434
  - **eriocarpus**, *Muell.* ,, 432
  - **filiformis**, *Hk. f.* ,, 435
  - **floribundus**, *Muell.* ,, 432
  - **fuscescens**, *Muell.* ,, 441
  - **Griffithianus**, *Hk. f.* ,, 433
  - **? Helferi**, *Muell.* ,, 431
  - **khasianus**, *Hk. f.* ,, 438
  - **Kingii**, *Hk. f.* ,, 439
  - **? Kunstleri**, *King* ,, 443
  - **Kurzii**, *Hk. f.* ,, 427
  - **lancifolius**, *Hk. f.* ,, 434
  - *lappaceus*, Muell. ,, 425
  - **Lawii**, *Muell.* ,, 438
  - **leptostachyus**, *Hk. f.* ,, 435
  - **leucodermis**, *Hk. f.* ,, 441
  - *longipes*, Muell. ,, 426
  - **macrostachyus**, *Muell.* ,, 429
  - *micranthus*, Muell. ,, 440
  - *moluccanus*, Linn. ,, 444
  - **muricatus**, *Bedd.* v. 436, 438
  - *muricatus*, Kurz v. 439
  - *muricatus*, Muell. ,, 437
  - **nepalensis**, *Muell.* ,, 428
  - *nitidus*, Muell. ,, 444
  - *oreophilus*, Muell. ,, 429
  - *paniculatus*, Muell. v. 427, 430
  - **penangensis**, *Muell.* v. 440
  - **philippinensis**, *Muell.* ,, 442
  - **polyneurus**, *Hk. f.* ,, 439
  - **Porterianus**, *Muell.* ,, 432
  - **puberulus**, *Hk. f.* ,, 435
  - **repandus**, *Muell.* ,, 442
  - **rhamnifolius**, *Muell.* ,, 440
  - **ricinoides**, *Muell.* ,, 430
  - **Roxburghianus**, *Muell.* ,, 428
  - **stenanthus**, *Muell.* ,, 437
  - **subpeltatus**, *Muell.* i. 690, v. 433
  - *tetracoccus*, Kurz v. 429
  - **? vernicosus**, *Hk. f.* ,, 443
  - **Walkeræ**, *Hk. f.* ,, 437
  - **Wallichianus**, *Muell.* ,, 434
  - **Wrayi**, *King* ,, 433
  - *zeylanicus*, Muell. ,, 440
- **MALPIGHIACEÆ** i. 417
- *Malus baccata*, Desv. ii. 373
  - *communis*, Desv. ,, 373
  - *Sieversii*, Ledeb. ,, 379
- **Malva**, *Linn.* i. 320
  - *alchemillæfolia*, Wall. ,, 320
  - *borealis*, Wallm. ,, 320
  - *ciliata*, Wall. ,, 320
  - *malwensis*, Edgew. ,, 319
  - *mauritiana*, DC. ,, 320
  - *neilgherrensis*, Wight ,, 320
  - **parviflora**, *Linn.* ,, 321
  - *parviflora*, Huds. ,, 320
  - **rotundifolia**, *Linn.* ,, 320
  - *rotundifolia*, Roxb. ,, 320
  - **silvestris**, *Linn.* ,, 320
  - *spicata*, Linn. ,, 321
  - *tricuspidata*, Ait. ,, 321
  - **verticillata**, *Linn.* ,, 320
  - *vulgaris*, Fries ,, 320
- **MALVACEÆ** i. 317
- **Malvastrum**, *A. Gray* i. 321
  - **spicatum**, *A. Gray* ,, 321
  - **tricuspidatum**, *A. Gray* ,, 321
- *Malvaviscus populneus*, Gærtn. i. 345
- **MALVEÆ** i. 318
- *Mammea americana*, Linn. i. 259
  - *asiatica*, Linn. ii. 507
  - *longifolia*, Planch. & Tr. i. 270
  - *siamensis*, T. Anders. ,, 271
- *Mandelorna insignis*, Steud. vii. 186
- **Mandragora**, *Juss.* iv. 241
  - **caulescens**, *Clarke* ,, 242
  - *officinarum*, Linn. ,, 242
- **Mangifera**, *Linn.* ii. 13
  - *axillaris*, Lamk. ,, 23
  - **cæsia**, *Jack* ,, 19
  - **caloneura**, *Kurz* ,, 14
  - *domestica*, Gærtn. ,, 14
  - **fœtida**, *Lour.* ,, 18
  - *fœtida*, Bl. ,, 19
  - *fœtida*, Miq. ii. 17, 19
  - **fragrans**, *Maingay* ii. 18
  - *glauca*, Rottb. i. 623
  - **gracilipes**, *Hk. f.* ii. 16
  - **Griffithii**, *Hk. f.* ,, 14
  - *Horsfieldii*, Miq. ,, 19
  - **indica**, *Linn.* ,, 13
  - *indica*, Thw. ,, 16
  - *indica*, Wall. ,, 15
  - **lagenifera**, *Griff.* ,, 18
  - **longipes**, *Griff.* ,, 15
  - *macrocarpa*, Bl. ,, 18
  - **Maingayi**, *Hk. f.* ,, 17
  - **microphylla**, *Griff.* ,, 17
  - **oblongifolia**, *Hk. f.* ,, 16
  - **odorata**, *Griff.* ,, 17
  - *oppositifolia*, Roxb. ,, 21
  - *Parih*, Miq. ,, 18
  - **pentandra**, *Hk. f.* ,, 14
  - *pinnata*, Koen. ,, 42

Mangifera Vol. Page
  policarpa, *Griff.* ... ... ii. 20
  quadrifida, *Jack* ... ... „ 16
  sclerophylla, *Hk. f.* ... ... „ 15
  superba, *Hk. f.* ... ... „ 19
  sylvatica, *Roxb.* ... ... „ 15
  zeylanica, *Hk. f.* ... ... „ 16
Manglietia, *Bl.* ... ... i. 42
  Candollei, Wall. ... ... „ 41
  Caveana, *Hk. f. & T.* ... „ 42
  insignis, *Bl.* ... ... „ 42
Manihot utilissima, Pohl ... v. 239
Manisuris, *Sw.* ... ... vii. 159
  granularis, *Linn. f.* ... „ 159
  hirta, Russ. ... ... „ 159
  Myurus, Linn. ... ... „ 154
  polystachya, Beauv. ... „ 159
  porifera, *Hack.* ... ... „ 160
Manna hebraica, D. Don ... ii. 145
  nepalensis, D. Don ... ... „ 145
Mantisia, *Sims* ... ... vi. 200
  saltatoria, *Sims* ... ... „ 200
  spathulata, *Schult.* ... ... „ 201
MANULEÆ ... ... iv. 247, 258
Manungala pendula, Blanc. i. 519
Maoutia, *Wedd.* ... ... v. 592
  Puya, *Wedd.* ... ... „ 592
Mapania, *Aubl.* ... ... vi. 680
  andamanica, *Clarke* ... „ 681
  bancana, Benth. & Hk. f. „ 680
  humilis, *Nav. & Vill.* ... „ 683
  hypolytroides, Benth. ... „ 680
  immersa, *Benth.* ... ... „ 682
  Kurzii, *Clarke* ... ... „ 681
  longa, *Clarke* ... ... „ 683
  lucida, N. E. Br. ... ... „ 683
  multispicata, *Clarke* ... „ 682
  palustris, *Benth.* ... ... „ 681
  Pandanophyllum, Sch. & Hollr. ... ... „ 680
  silhetensis, *Clarke* ... ... „ 681
  tenuiscapa, *Clarke* ... ... „ 683
  Wallichii, *Clarke* ... ... „ 682
  zeylanica, *Benth.* ... ... „ 682
Mappa acuminatissima, Zipp. v. 433
  bancana, Miq. ... ... „ 451
  cochinchinensis, Spreng. ... „ 430
  denticulata, Miq. ... ... „ 446
  digyna, Muell. ... ... „ 453
  floribunda, Zoll. & Mor. ... „ 432
  glabra, A. Juss. ... ... „ 447
  gummiflua (*gummiflora*), Miq. ... ... „ 446
  ? *hypoleuca*, Rchb. & Zoll. „ 448
  javanica, Bl. ... ... „ 451
  megalophylla, Muell. ... „ 449
  moluccana, Wight ... ... „ 447
  paniculata, Wall. ... ... „ 446
Mappa Vol. Page
  ? *peltata*, Wight ... ... v. 448
  populifolia, Muell. ... ... „ 451
  rugosa, Muell. ... ... „ 449
  Tanaria, Spreng. ... ... „ 447
  Tanarius, Bl. ... ... „ 447
  tomentosa, Bl. ... ... „ 447
  trichocarpa, Rchb. & Zoll. „ 450
  triloba, Muell. ... ... „ 452
  truncata, Muell. ... ... „ 446
  Wallichii, Baill. ... ... „ 446
  Zippelii, Zoll. & Mor. ... „ 430
  Zollingeri, Miq. ... ... „ 450
Mappia, *Jacq.* ... . i. 588
  Championiana, Miers ... „ 589
  fœtida, *Miers* ... ... „ 589
  fœtida, Bedd. ... ... „ 589
  Gardneriana, Miers... ... „ 589
  oblonga, *Miers* ... i. 589, iv. 140
  ovata, *Miers* ... ... i. 589
  ovata, Miers ... ... iv. 144
  tomentosa, *Miers* ... ... i. 589
  Wightiana, Miers ... ... „ 589
Maranta caespitosa, A. Dietr. vi. 259
  dichotoma, Wall. ... ... „ 258
  Galanga, Linn. ... ... „ 253
  grandis, Miq. ... ... „ 258
  imbricata, A. Dietr. ... „ 259
  malaccensis, Burm. ... ... „ 255
  parviflora, A. Dietr. ... „ 259
  Placentaria, A. Dietr. ... „ 259
  ramosissima, Wall. ... ... „ 258
  spicata, Thw. ... ... „ 260
  virgata, Wall. ... ... „ 258
MARANTEÆ ... ... vi. 200
Maranthes multiflora, Korth. ii. 310
Margarocarpus vimineus, Wedd. ... ... v. 581
Margarospermum arvense, Dcne. ... ... iv. 174
  officinale, Dcne. ... ... „ 175
Mariscus, *Vahl* ... ... vi. 619
  albescens, *Gaud.* ... ... „ 623
  biglumis, Gaertn. ... ... „ 622
  bulbosus, *Clarke* ... ... „ 620
  capitatus, Zoll. ... ... „ 677
  corymbosus, Boeck. ... ... „ 622
  cyperinus, *Vahl* ... ... „ 621
  cyperinus, Nees ... vi. 621, 622
  cyperoides, Dietr. ... ... vi. 625
  dilutus, Nees ... ... „ 624
  Dregeanus, *Kunth* ... ... „ 620
  ferax, *Clarke* ... ... „ 624
  giganteus, Boeck. ... ... „ 624
  Hookerianus, *Clarke* ... „ 623
  irroratus, Nees ... ... „ 620
  ischnos, *Clarke*... ... ... „ 623
  kyllingiæformis, Boeck. ... „ 620

Mariscus Vol. Page
microcephalus, *Presl* ... vi. 624
paniceus, *Vahl* ... ,, 620
paniceus, Strach. ... ,, 622
pictus, *Nees* ... ,, 621
pictus, Nees ... ,, 620
Pullu, Steud. ... ,, 621
Sieberianus, *Nees* ... ,, 622
squarrosus, *Clarke* ... ,, 623
sundaicus, Miq. ... ,, 621
tenuifolius, *Schrad.* ... ,, 622
umbellatus, Moritz. ... ,, 621
umbellatus, Vahl ... ,, 622
Wallichianus, Kunth ... ,, 621
sp., Wall. vi. 618, 620. 621, 622, 624
Markhamia stipulata, Seem. iv. 379
Marlea, *Roxb.* ... ii. 742
affinis, Dcne. ... ,, 743
barbata, *R. Br.* ... ,, 743
begoniæfolia, *Roxb.* ... ,, 743
ebenacea, *Clarke* ... ,, 742
Griffithii, *Clarke* ... ,, 742
heterophylla ... ,, 744
macrophylla, Sieb. & Zucc. ,, 744
nobilis, *Clarke* ... ,, 743
tomentosa, Endl. ... ,, 743
sp., *Hk. f. & T.* ... ,, 744
Marmoritis rotundifolia, Benth. ... iv. 662
Marrubium, *Linn.* ... iv. 671
indicum, Burm. ... ,, 672
lanatum, *Benth.* ... ,, 671
Malcolmii, Dalz. ... ,, 650
mollissimum, D. Don ... ,, 681
odoratissimum, Burm. ... ,, 672
propinquum, Benth. ... ,, 671
vulgare, *Linn.* ... ,, 671
Marsdenia, *Br.* ... iv. 34
angustifolia, Wight ... ,, 39
Brunoniana, *W. & A.* ... ,, 36
Calesiana, *Wight* ... ,, 37
eriocarpa, *Hk. f.* ... ,, 35
Griffithii, *Hk. f.* ... ,, 36
Hamiltonii, *Wight* ... ,, 36
Jenkinsii, *Hk. f.* ... ,, 36
lucida, *Edgew.* ... ,, 36
lucida, Hk. f. & T. ... ,, 37
monostachya, Wall. ... ,, 34
rotundifolia, *Dcne.* ... ,, 37
Roylei, *Wight* ... ,, 35
tenacissima, *W. & A.* ... ,, 35
thyrsiflora, *Hk. f.* ... ,, 37
tinctoria, *Br.* ... ,, 34
tinctoria, Hk. f. & T. ... ,, 37
MARSDENIEÆ ... iv. 3, 27
Martynia diandra, Glox. ... iv. 386
lanceolata, Moon ... iv. 356, 437
Marumia, *Bl.* ... ii. 541

Marumia Vol. Page
affinis, Korth. ... ii. 542
echinulata, Naud. ... ,, 542
nemorosa, *Bl.* ... ,, 542
oligantha, Naud. ... ,, 542
reticulata, *Bl.* ... ,, 542
stellulata, Korth. ... ,, 542
zeylanica, *Bl.* ... ,, 542
Maruta Cotula, DC. ... iii. 312
hemisphærica, DC. ... ,, 316
Mastersia, *Benth.* ... ii. 195
cleistocarpa, *Baker* ... ,, 195
Mastixia, *Bl.* ... ii. 745
arborea, *Clarke* ... ,, 745
bracteata, *Clarke* ... ,, 746
cuspidata, Bl. ... ,, 746
Junghuhniana, *Miq.* ... ,, 746
Maingayi, *Clarke* ... ,, 746
pentandra, *Bl.* ... ,, 746
tetrandra, *Clarke* ... ,, 745
trichotoma, Bl. ... ,, 746
Mastostigma varians, Stocks iv. 16
Matrella juncea, Pers. ... vii. 99
Matricaria, *Linn.* ... iii. 315
aurea, Boiss. ... ,, 317
Chamomilla, *Linn.* ... ,, 315
oleracea, Ham. ... ,, 314
præcox, *DC.* ... ,, 316
suaveolens, Linn. ... ,, 315
Matthæa, *Bl.* ... v. 115
sancta, *Bl.* ... ,, 115
Matthiola, *Br.* ... i. 130
incana, Br. ... ,, 131
odoratissima, *Br.* ... ,, 131
tristis, Br. ... ,, 131
Mattia himalayensis, Klotz. iv. 162
Mayodendron, *Kurz* ... iv. 381
igneum, *Kurz* ... ,, 382
Mays Zea, Gaertn. ... vii. 102
Mazus, *Lour.* ... iv. 259
bicolor, Benth. ... ,, 259
dentatus, *Wall.* ... ,, 260
pinnatus, Wall. ... ,, 288
rugosus, *Lour.* ... ,, 259
surculosus, *D. Don* ... ,, 260
vandelloides, Hance ... ,, 259
Meconopsis, *Vig.* ... i. 118
aculeata, *Royle* ... ,, 118
Gul.-Waldemarii, Klotz. ,, 118
horridula, *Hk. f. & T.* ... ,, 118
nipalensis, *DC.* ... ,, 118
robusta, *Hk. f. & T.* ... ,, 118
simplicifolia, *Hk. f. & T.* ,, 118
Wallichii, *Hook.* ... ,, 119
Mecopus, *Benn.* ... ii. 160
nidulans, *Benn.* ... ,, 160
MEDEOLEÆ ... vi. 301
Medicago, *Linn.* ... ii. 89

Medicago Vol. Page
canescens, Grab. ... ... ii. 90
denticulata, *Willd.* ... ,, 90
falcata, *Linn.* ... ,, 90
laciniata, *All.* ... ,, 90
lupulina, *Linn.* ... ,, 90
minima, *Lamk.* ... ,, 91
orbicularis, *All.* ... ,, 90
polymorpha, Roxb. ... ,, 90
procumbens, Besser ... ,, 90
sativa, Linn. ... ,, 90
sativa, Wall. ... ,, 90
Medinilla, *Gaud.* ... ii. 546
Beddomei, *Clarke* ... ,, 548
crassifolia, Bl. ... ,, 547
crassifolia, Triana ... ,, 547
erythrophylla, Ldl. ... ,, 547
fuchsioides, *Gardn.* ... ,, 548
Griffithii, *Clarke* ... ,, 549
Hasseltii, *Bl.* ... ,, 547
himalayana, *Hk. f.* ... ,, 549
macrocarpa, *Bl.* ... ,, 547
maculata, *Gardn.* ... ,, 548
Maingayi, *Clarke* ... ,, 549
malabarica, *Bedd.* ... ,, 548
merguiensis, *Clarke* ... ,, 549
pauciflora, *Hk. f.* ... ,, 549
radicans, Bedd. ... ,, 548
rosea, *Gaud.* ... ,, 547
rubicunda, *Bl.* ... ,, 547
speciosa, *Bl.* ... ,, 549
? *Walkeri*, Wight ... ,, 526
MEDINILLEÆ ... ii. 513
Medora divaricata, Kunth ... vi. 323
Medusa anguifera, Lour. ... i. 188
Meesia serrata, Gærtn. ... i. 525
Megabotrya meliæfolia, Hance i. 490
Megacarpæa, *DC.* ... i. 161
bifida, *Benth.* ... ,, 161
polyandra, *Benth.* ... ,, 161
Megalachne zeylanica, Thw. vii. 269
Megastachya ciliaris, Beauv. vii. 315
elongata, Beauv. ... ,, 319
Eragrostis, Beauv. ... ,, 320
? *papposa*, R. & S. ... ,, 323
polymorpha, Beauv. ... vii. 317, 319
Megera, vide *Meyera* ... iii. 304
Megistostigma, *Hk. f.* ... v. 466
malaccensis, *Hk. f.* ... ,, 467
Meistera, Giseke ... vi. 237
Melaleuca, *Linn.* ... ii. 464
Cajuputi, Roxb. ... ,, 465
Cumingiana, Turcz. ... ,, 465
decurrens, Wall. ... ,, 467
eugeniifolia, Wall. ... ,, 467
lancifolia, Turcz. ... ,, 465
Leucadendron, *Linn.* ... ,, 465
Leucadendron, Lam. ... ,, 465

Melaleuca Vol. Page
minor, Sm. ... ii. 465
saligna, Bl. ... ,, 465
viridiflora, Gærtn. ... ,, 465
Melampyrum, *Linn.* ... iv. 318
indicum, *Hk. f. & T.* ... ,, 318
Melandryum apetalum, Rohrb. i. 222
brachypetalum, Fenzl ... ,, 224
Falconeri, Rohrb. ... ,, 222
Griffithii, Rohrb. ... ,, 220
inflatum, Rohrb. ... ,, 225
intrusum, Rohrb. ... ,, 226
macrorhizum, Rohrb. ... ,, 223
multicaule, Rohrb. ... ,, 224
nutans, Rohrb. ... i. 225, 226
Melanium fruticosum, Spreng. ii. 573
Melanocenchris Jacquemontii,
J. & S. ... vii. 284
Perrottetii, J. & S. ... ,, 284
plumosa, J. & S. ... ,, 284
Rothiana, Nees ... ,, 283
Royleana, Nees ... ,, 284
Melanochyla, *Hk. f.* ... ii. 38
angustifolia, *Hk. f.* ... ,, 39
auriculata, *Hk. f.* ... ,, 39
Maingayi, *Hk. f.* ... ,, 39
tomentosa, *Hk. f.* ... ,, 38
Melanorrhœa, *Wall.* ... ii. 25
glabra, *Wall.* ... ,, 25
Maingayi, *Hk. f.* ... ,, 25
usitata, *Wall.* ... ,, 25
Wallichii, *Hk. f.* ... ,, 25
sp., Griff. ... ,, 25
Melanoseris bracteata, Hk.f.&T. iii. 409
lyrata, Dcne. ... ,, 409
paniculata, Edgew. ... ,, 408
saxatilis, Edgew. ... ,, 408
Melanthaceæ, Griff. ... vi. 356
Melanthesa chinensis, Bl. ... v. 331
obliqua, Wight ... ,, 329
reclinata, Muell. ... ,, 331
rhamnoides, Wight ... ,, 330
rupestris, Miq. ... ,, 295
turbinata, Wight ... ,, 329
Melanthesopsis fruticosa, Kurz v. 332
patens, Muell. ... ,, 329
variabilis, Muell. ... ,, 329
Melanthium caricinum, Roth vi. 357
hyacinthoides, Herb. Madr. ,, 348
indicum, Linn. ... ,, 357
nudum, Heyne ... ,, 348
racemosum, Roth ... ,, 357
Melastoma, *Linn.* ... ii. 523
annulatum, Wall. ... ,, 546
anoplanthum, Naud. ... ,, 523
asperum, Linn. ... ,, 519
? *barbatum*, Wall. ... ,, 546
brachyodon, Naud. ... ,, 524

Melastoma ... Vol. Page
bracteatum, Jack ... ... ii. 543
bracteatum, Wall. ... ... „ 543
cernuum, Roxb. ... ... „ 526
cernuum, Wall. ... ... „ 545
crinitum, Naud. ... ... „ 524
crinitum, Roxb. ... ... „ 517
curvum, *Roxb.* ... ... „ 525
cyanoides, DC. ... ... „ 522
decemfidum, Jack ... ... „ 524
ellipticum, Naud. ... ... „ 525
erythrophyllum, Wall. ... „ 547
exiguum, Jack ... ... „ 527
eximium, Bl. ... ... „ 549
fallax, Wall. ... ... ii. 544, 545
fasciculare, Naud. ... ... ii. 524
Finlaysonii, Wall. ... ... „ 525
? *glaucum*, Griff. ... ... „ 545
glaucum, Jack ... ... „ 546
glaucum, Wall. ... ... „ 545
gracile, Jack ... ... „ 545
Houtteanum, *Naud.* ... „ 524
imbricatum, *Wall.* ... ... „ 524
lanuginosum, Bl. ... ... „ 525
laurifolium, Wall. ... ... „ 547
? *littoreum*, Wall. ... ... „ 528
longifolium, Naud ... ... „ 525
malabathricum, *Linn.* ... „ 523
malabathricum, Jack ... „ 524
microphyllum, Naud. ... „ 525
moluccanum, Bl. ... ... „ 522
napalense, Lodd. ... ... „ 524
nemorosum, Jack ... ... „ 542
normale, *D. Don* ... ... „ 524
? *obvolutum*, Jack ... ... „ 523
oxyphyllum, Benth. ... ... „ 528
pallidum, Jack ... ... „ 544
petiolare, Wall. ... ... „ 545
polyanthum, *Bl.* ... ... „ 523
polyanthum, Benth. ... ... „ 546
pulchellum, Roxb. ... ... „ 518
pulverulentum, Jack ... „ 550
reflexum, Bl. ... ... „ 550
rhodocarpum, Wall. ... ... „ 542
rotundifolium, Jack ... ... „ 541
Royenii, Bl. ... ... „ 525
rubicundum, Jack ... ii. 547, 550
rubiginosum, Wall. ... ... ii. 544
rugosum, Roxb. ... ... „ 525
sanguineum, *Sims* ... ... „ 524
smilacifolium, Wall. ... „ 550
triflorum, Naud. ... ... „ 525
vagans, Roxb. ... ... „ 526
velutinum, Seem. ... ... „ 524
Wallichii, DC. ... ... „ 524
Melastomacea, Griff. ... ... ii. 518
MELASTOMACEÆ ... ... ii. 512
Melastomeæ ... ... ii. 512

Vol. Page
Melhania, *Forsk* ... ... i. 372
abutiloides, Arn. ... ... „ 373
abutiloides, Aitch. ... ... „ 373
abyssinica, *A. Rich.* ... ... „ 372
bracteosa, Boiss. ... ... „ 373
cannabina, *Wight* ... ... „ 372
Denhami, *Br.* ... ... „ 373
futteyporensis, *Munro* ... „ 373
Hamiltoniana, *Wall.* ... „ 372
Hamiltoniana, Munro ... „ 373
incana, *Heyne* ... ... „ 372
ovata, Boiss. ... ... „ 372
tomentosa, *Stocks* ... ... „ 373
Melia, *Linn.* ... ... i. 543
æthiopica, Welw. ... ... „ 545
argentea, Hb. Ham. ... ... „ 545
australasica, Juss. ... ... „ 545
Azadirachta, *Linn.* ... ... „ 544
Azedarach, *Linn.* ... ... „ 544
baccifera, Roth ... ... „ 545
Bombolo, Welw. ... ... „ 545
Bukayun, Royle ... ... „ 544
composita, Willd. ... ... „ 545
dubia, *Cav.* ... ... „ 545
excelsa, *Jack* ... ... „ 544
indica, Brandis... 544
Koetjape, Burm. ... ... „ 553
montana, Hb. Madr. ... „ 545
parviflora, Moon ... ... „ 544
penduliflora, Wall. ... ... „ 550
pumila, Moon ... ... „ 543
robusta, Roxb. ... . „ 545
sempervirens, Sw. ... ... „ 544
superba, Roxb. ... ... „ 545
tomentosa, *Roxb.* ... ... „ 543
? *tomentosa*, Kurz ... ... „ 568
Meliacea penangiana, Wall. i. 569
rugosa, Wall. ... ... „ 569
singapureana, Wall. ... ... „ 555
Wightiana, Wall. ... ... „ 559
sp., Griff. ... ... „ 560
MELIACEÆ ... ... i. 540
MELIANTHEÆ ... ... i. 669
Melianthus, *Tourn.* ... ... i. 697
himalayanus, Wall. ... ... „ 698
major, *Linn.* ... . „ 698
Melica, *Linn.* ... ... vii. 329
ciliata, Duthie ... ... „ 329
Cupani, *Guss.* ... ... „ 329
diandra, Roxb. ... ... „ 332
digitata, Roxb. ... ... „ 290
gracilis, Aitch. & Hemsl. „ 331
Hohenackeri, Boiss. ... „ 329
Jacquemontii, Dcne. ... „ 329
lappacea, Rasp. ... ... „ 332
latifolia, Roxb. ... ... „ 61
micrantha, Boiss. & Heldr. „ 330

Melica ... Vol. Page
nutans, *Linn.* ... vii. 330
persica, Kunth ... „ 330
refracta, Roxb. ... „ 332
scaberrima, *Hk. f.* ... „ 330
secunda, Regel ... „ 331
trachyantha, Boiss. ... „ 330
Melicocca pubescens, DC. ... i. 681
trijuga, Juss. ... „ 681
Melicope, *Forst.* ... i. 491
? Helferi, *Hk. f.* ... „ 492
indica, *Wight* ... i. 492, 496
tetrandra, Roxb. ... i. 491
MELIEÆ ... i. 540
Melilotus, *Juss.* ... ii. 89
alba, *Lamk.* ... „ 89
altissima, Thuill. ... „ 89
altissima, Wall. ... „ 89
Emodi, Wall. ... „ 88
indica, All. ... „ 89
italica, Lam. ... „ 89
leucantha, Koch ... „ 89
macrorhiza, Pers. ... „ 89
minima, Roth ... „ 89
officinalis, *Willd.* ... „ 89
parviflora, *Desf.* ... „ 89
parviflora, Wall. ... „ 89
vulgaris, Willd. ... „ 89
Meliosma, *Bl.* ... ii. 3
acuminata, Royle ... „ 4
Arnottiana, *Walp.* ... „ 6
Arnottiana, Bedd. ... i. 685
confusa, Bl. ... ii. 7
dilleniæfolia, *Walp.* ... „ 4
elliptica, *Hk. f.* ... „ 5
ferruginea, Sieb. & Zucc. ... „ 4
integrifolia, nom. delend. „ 4, 5
lanceolata, *Bl.* ... „ 7
lancifolia, *Hk. f.* ... „ 5
myriantha, Sieb. & Zucc. „ 4
nitida, Bl. ... „ 6
pinnata, *Maxim.* ... „ 6
pungens, *Wall.* ... „ 4
pungens, Wall. ... „ 4
rigida, Sieb. & Zucc. ... „ 4
simplicifolia, *Walp.* ... „ 5
sumatrana, *Walp.* ... „ 6
Wallichii, *Planch.* ... „ 6
Wightii, *Planch.* ... „ 4
Melissa, *Linn.* ... iv. 651
Clinopodium, Benth. ... „ 650
flava, *Benth.* ... „ 652
longicaulis, Benth. ... „ 651
maxima, Arduin. ... „ 646
nepalensis, Benth. ... „ 647
officinalis, Linn. ... „ 651
parviflora, *Benth.* ... „ 651
repens, Benth. ... „ 651

Melissa ... Vol. Page
umbrosa, Bieb. ... iv. 651
Melocalamus, *Benth.* ... vii. 409
compactiflorus, *Benth.* ... „ 409
Melocanna, *Trin.* ... vii. 417
bambusoides, *Trin.* ... „ 417
gracilis, Kurz ... „ 416
humilis, *Kurz* ... „ 418
? *Kurzii*, Munro ... „ 393
lutescens, Kurz ... „ 414
Rheedii, Steud. ... „ 418
tenuispiculata, Kurz ... „ 416
virgata, Munro ... „ 414
Melochia, *Linn.* ... i. 373
affinis, Wall. ... „ 374
concatenata, Wall. ... „ 374
corchorifolia, *Linn.* ... „ 374
corchorifolia, Wall. ... „ 374
pauciflora, Wall. ... „ 374
pyramidata, Linn. ... „ 374
supina, Linn. ... „ 374
truncata, Wall. ... „ 322
truncata, Willd. ... „ 374
velutina, *Bedd.* ... „ 374
Melodinus, *Forst.* ... iii. 628
? *eugenifolius*, Wall. ... „ 628
khasianus, *Hk. f.* ... „ 629
? micranthus, *Hk. f.* ... „ 629
monogynus, *Roxb.* ... „ 629
orientalis, *Bl.* ... „ 629
Melodorum, *Dun.* ... i. 78
bicolor, *Hk. f. & T.* ... „ 80
cylindricum, *Maing.* ... „ 80
elegans, *Hk. f. & T.* ... „ 82
fulgens, *Hk. f. & T.* i. 82, v. 113
Griffithii, *Hk. f. & T.* ... i. 80
Kentii, Hk. f. & T. ... „ 82
lanuginosum, *Hk. f & T.* „ 79
latifolium, *Dun.* ... „ 79
Maingayi, *Hk. f. & T.* ... „ 80
manubriatum, *Hk. f. & T.* „ 79
mollissimum, Miq. ... „ 79
pisocarpum, *Hk. f. & T.* ... „ 82
polyanthum, *Hk. f. & T.* „ 81
prismaticum, *Hk. f. & T.* „ 81
rubiginosum, *Hk. f. & T.* „ 79
rufinerve, *Hk. f. & T.* ... „ 81
verrucosum, *Hk. f. & T.* ... „ 80
Wallichii, *Hk. f. & T.* ... „ 81
Melothria, *Linn.* ... ii. 625
bicirrhosa, *Clarke* ... „ 627
deltoidea, Thw. ... „ 626
fœtida, Lamk. ... „ 627
indica, *Lour.* ... „ 626
odorata, *Hk. f. & T.* ... „ 626
Regelii, Naud. ... „ 626
Wallichii, *Clarke* ... „ 626
zeylanica, *Clarke* ... „ 626

Vol. Page
Melothria (Melothrix) zeylanica, Kœn. ... i. 662
MEMECYLEÆ ... ii. 513
Memecylon, *Linn.* ... ii. 553
acuminatum, *Sm.* ... „ 562
acuminatum, Wall. ... „ 565
amabile, *Bedd.* ... „ 555
ambiguum, Bl. ... „ 557
Amherstianum, *Clarke* ... „ 557
amplexicaule, *Roxb.* ... „ 569
angustifolium, *Wight* ... „ 562
Arnottianum, *Thw.* ... „ 553
australe, F. Muell. ... „ 555
cæruleum, *Jack* ... „ 559
campanulatum, *Clarke* ... „ 563
Campongum, Miq. ... „ 554
capitellatum, Heyne ... „ 564
capitellatum, Linn. ... „ 564
capitellatum, Thw. ... „ 564
celastrinum, Kurz ... „ 558
cerasiforme, *Kurz* ... „ 557
cordatum, Wall. ... „ 559
costatum, *Miq.* ... „ 558
cuneatum, Thw. ... „ 564
deccanense, *Clarke* ... „ 560
depressum, Benth. ... „ 559
edule, *Roxb.* ... „ 563
edule, Lamk. ... „ 573
edule, Roxb. ... ii. 563, 564
elegans, *Kurz* ... „ 554
elegantulum, *Thw.* ... „ 555
ellipticum, *Thw.* ... „ 556
flavescens, Triana ... „ 562
floribundum, Wall. ... ii. 499, 564
fuscescens, *Thw.* ... ii. 562
garcinioides, Bl. ... „ 561
Gardneri, *Thw.* ... „ 553
globiferum, Wall. ... „ 563
gracile, *Bedd.* ... „ 555
grande, *Retz.* ... „ 557
grande, Bl. ... „ 558
grande, Wall. ... „ 564
Griffithianum, *Naud.* ... „ 554
Griffithianum, Kurz ... „ 558
heteropleurum, *Bl.* ... „ 557
Heyneanum, *Benth.* ... „ 560
Heyneanum, Wight ... „ 560
Hookeri, *Thw.* ... „ 554
Horsfieldii, Miq. ... ii. 554, 558
intermedium, *Bl.* ... ii. 561
jambosoides, Wight ... „ 560
lævigatum, *Bl.* ... „ 561
laxiflorum, Wall. ... „ 557
leucanthum, Thw. ... „ 564
lucidum, Presl ... „ 564
lutescens, Presl ... „ 559
madrocarpum, Thw. ... „ 556

Memecylon Vol. Page
macrophyllum, *Thw.* ... ii. 559
Maingayi, *Clarke* ... „ 557
manillanum, Naud. ... „ 559
microstomum, *Clarke* ... „ 557
myrsinoides, Bl. ... ii. 555, 563
myrtifolium, Wall. ... ii. 564
Myrtilli, Bl. ... „ 561
obtusum, Wall. ... „ 564
orbiculare, *Thw.* ... „ 560
ovatum, Sm. ... „ 564
ovoideum, *Thw.* ... „ 556
pachyderma, Wall. ... „ 561
parvifolium, Thw. ... „ 556
pauciflorum, *Bl.* ... „ 555
pauciflorum, Wall. ii. 565, iii. 133
phyllanthifolium, *Thw.* ... ii. 563
plebejum, *Kurz* ... „ 561
prasinum, Naud. ... „ 564
procerum, *Thw.* ... „ 556
pulchrum, Kurz ... „ 559
punctatum, Presl ... „ 564
pyrifolium, Naud. ... „ 563
pyrifolium, Presl ... „ 564
pyriforme, Wall. ... „ 565
ramiflorum, Griff. ... „ 564
revolutum, *Thw.* ... „ 560
rhinophyllum, *Thw.* ... „ 562
rostratum, *Thw.* ... „ 562
Royenii, Bl. ... „ 564
rubro-cæruleum, Thw. ... „ 564
scutellatum, Naud. ... „ 564
sessile, Wall. ... ii. 559, 564
subquadrangulare, DC. ... ii. 564
subtrinervium, *Miq.* ... „ 565
sylvaticum, Thw. ... „ 561
terminale, *Dalz.* ... „ 558
tinctorium, Kœn. ... „ 563
umbellatum, Benth. ... „ 555
umbellatum, Bl. ... „ 561
umbellatum, Burm. ... ii. 563, 563
umbellatum, Heyne ... ii. 564
umbellatum, Thw. ... „ 564
umbellatum, Wall. ... ii. 556, 563
varians, *Thw.* ... ii. 556
Vosmærianum, Scheff. ... „ 561
Walkeri, Hook. ... „ 564
Wightianum, Triana ... „ 560
Wightii, *Thw.* ... „ 554
Memorialis ambigua, Wedd. v. 584
aquatica, Wedd. ... „ 583
bracteata, Wedd. ... „ 585
caudata, Wedd. ... „ 585
ciliaris, Ham. ... „ 583
concinna, Wedd. ... „ 584
cordata, Wedd. ... „ 584
Dalzellii, Wedd. ... „ 587
hirta, Wedd. ... „ 585

Memorialis Vol. Page
hispida, Ham. ... v. 586
hispida, Wedd. ... v. 585, 586
integrifolia, Wedd. ... v. 587
mysorensis, Wedd. ... „ 586
nilghirensis, Wedd. ... „ 584
parvifolia, Wedd. ... „ 587
pentandra, Wedd. ... „ 583
quinquenervis, Ham. ... „ 586
quinquenervis, Wedd. ... „ 586
scabra, Wedd. ... „ 585
ternata, Wedd. ... „ 584
triandra, Wedd. ... „ 587
Mengea tenuifolia, Moq. ... iv. 722
MENISPERMACEÆ ... i. 94
Menispermea, Griff. ... „ 595
Menispermum acuminatum, Lamk. ... i. 99
Cocculus, Linn. ... „ 98
cordifolium, Willd. ... „ 97
crispum, Linn. ... „ 96
fenestratum, Gærtn. ... „ 99
heteroclitum, Roxb. ... „ 98
hirsutum, Linn. ... „ 101
laurifolium, Roxb. ... „ 101
malabaricum, Lamk. ... „ 96
myosotoides, Linn. ... „ 101
orbiculatum, Linn. ... „ 104
peltatum, Lamk. ... „ 104
polycarpum, Roxb. ... „ 99
radiatum, Lamk. ... „ 99
tomentosum, Roxb. ... „ 96
triandrum, Roxb. ... „ 100
tuberculatum, Lamk. ... „ 96
verrucosum, Roxb. ... „ 96
villosum, Lamk. ... „ 101
villosum, Roxb. ... „ 102
Mentha, *Linn.* ... iv. 647
aquatica, Linn. ... „ 647
arvensis, *Linn.* ... „ 648
arvensis, Thw. ... „ 648
auricularia, Linn. ... „ 638
blanda, DC. ... „ 644
blanda, Wall. ... „ 644
fœtida, Burm. ... „ 638
? *fruticosa*, Roxb. ... „ 632
incana, Willd. ... „ 647
javanica, Bl. ... „ 648
malabarica, *Heyne* ... „ 640
myosuroides, Roth ... „ 638
ocimoides, Lamk. ... „ 610
ovata, Cav. ... „ 646
paniculata, Roxb. ... „ 644
perilloides, Willd. ... „ 646
piperita, Linn. ... „ 647
pumila, Grah. ... „ 640
quadrifolia, D. Don ... „ 639
quadrifolia, Roxb. ... „ 639

Mentha Vol. Page
quaternifolia, Heyne ... iv. 639
Royleana, Benth. ... „ 647
rugosa, Herb. Heyne ... „ 638
sativa, Linn. ... „ 647
sativa, Roxb ... „ 648
secunda, Roxb. ... „ 632
stellata, Ham. ... „ 640
stellata, Lour. ... „ 640
sylvestris, *Linn.* ... „ 647
venulosa, Herb. Heyne ... „ 638
verticillata, D. Don ... „ 640
verticillata, Roxb. ... „ 640
viridis, Linn. ... „ 647
sp., Burm. ... „ 610
MENYANTHEÆ ... iv. 94
Menyanthes, *Linn.* ... iv. 130
biflora, Moon ... „ 132
campestris, Macrae & Wight ... „ 132
campestris, Moon ... „ 132
cristata, Roxb. ... „ 131
indica, Linn. ... „ 132
nymphæoides, Linn. ... „ 131
trifoliata, *Linn.* ... „ 130
Meoschium aristatum, Beauv. vii. 127
Arnottianum, Nees ... „ 127
barbatum, Beauv. ... „ 127
elatum, Nees ... „ 127
elegans, Arn. & Nees ... „ 128
Griffithii, Nees & Arn. ... „ 127
imbricatum, Munro ... „ 127
monostachys, W. & A. ... „ 127
Neesianum, Arn. ... „ 127
Royleanum, Nees ... „ 128
rugosum, Nees ... „ 128
rugosum, Wall. ... „ 128
semisagittatum, Schult. ... „ 130
Wightianum, Nees ... „ 128
Wightii, Nees ... „ 128
Mephitidia attenuata, DC. ... iii. 181
chinensis, Champ. ... „ 187
cyanocarpa, DC. ... „ 179
Gardneri, Thw. ... „ 186
lucida, DC. ... „ 184
Moonii, Thw. ... „ 180
obscura, DC. ... „ 183
oligantha, Thw. ... „ 186
protracta, Thw. ... „ 189
rhinozerotis, Kurz ... „ 180
rhizophyllus, Thw. ... „ 185
stipularis, DC. ... „ 179
strigosa, Thw. ... „ 189
tomentosa, Thw. ... „ 185
varians, Thw. ... iii. 186, 189, 191
Walkeriana, Thw. ... iii. 186
Wallichii, W. & A. ... „ 180
sp., Griff. ... iii. 188, 192, 193

Mephitidia Vol. Page
  sp., Hk. f. & T. iii. 183, 184, 187, 190
Mercurialis alternifolia, Desv. ... v. 412
Merendera, *Ramond* ... vi. 356
  Aitchisoni, Hk. f. ... „ 357
  persica, *Boiss. & Kotsch.* „ 357
Meriandra, *Benth.* ... iv. 652
  bengalensis, *Benth.* ... „ 653
  strobilifera, *Benth.* ... „ 652
Mertensia, *Roth* ... iv. 169
  echioides, *Benth.* ... „ 170
  elongata, *Benth.* ... „ 170
  moltkioides, *Clarke* ... „ 170
  primuloides, *Clarke* ... „ 170
  racemosa, *Benth.* ... „ 171
  tibetica, *Clarke* ... „ 171
  sp., Hk. f. & T. ... „ 170
Mesoclastes brachystachys, Lindl. ... vi. 23
  uniflora, Lindl. ... „ 44
Mesodactylus deflexa, Wall. vi. 175
Mesona, *Blume* ... iv. 611
  Wallichiana, *Benth.* ... „ 611
Mesoptera, *Hk. f.* ... iii. 136
  Maingayi, *Hk. f.* ... „ 137
Mespilus acuminata, Lodd. ii. 385
  affinis, D. Don ... „ 385
  Bengalensis, Roxb. ... „ 371
  crenulata, D. Don ... „ 384
  Cuila, Ham. ... „ 372
  japonica, Banks ... „ 372
  tinctoria, D. Don ... „ 371
Messerschmidtia hispida, Benth. ... iv. 148
Mesua, *Linn.* ... i. 277
  coromandeliana, Wight ... „ 277
  ferrea, *Linn.* ... „ 277
  ? **lepidota**, *T. And.* ... „ 278
  Nagana, Gardn. ... „ 277
  nervosa, Pl. & Tr. ... „ 277
  pedunculata, Wight ... „ 277
  pulchella, Pl. & Tr. ... „ 277
  Roxburghii, Wight ... „ 277
  salicina, Pl. & Tr. ... „ 277
  sclerophylla, Thw. ... „ 277
  singaporiana, Wall. ... „ 276
  speciosa, Chois. ... „ 277
  speciosa, Thw. ... „ 278
  Thwaitesii, *Pl. & Tr.* ... „ 278
  Walkeriana, Pl. & Tr. ... „ 277
Metabolus cæruleus, Bl. ... iii. 58
  lineatus, Bartl. ... „ 58
  prostratus, Bl. ... „ 62
  venosus, Bl. ... „ 59
Metachilicum cyathiferum, Lindl. ... vi. 83
Methonica Doniana, Kunth „ 358
Methonica Vol. Page
  superba, Lamk. ... vi. 358
Metroxylon, *Rottb.* ... vi. 481
  inermis, Mart. ... „ 481
  Rumphii, *Mart.* ... „ 481
  Sagus, *Rottb.* ... „ 481
Meyenia Hawtayniana, Nees iv. 391
  longiflora, Benth. ... „ 391
Meyera Helonycha, Ham. ... iii. 304
    lapsu *Megera*.
  orientalis, D. Don ... „ 291
Mezierea Griffithiana, A. DC. ii. 644
  nepalensis, A. DC. ... „ 643
Mezoneurum, *Desf.* ... ii. 257
  cucullatum, *W. & A.* ... „ 258
  enneaphyllum, *W. & A.* „ 258
  glabrum, *Desf.* ... „ 258
  macrophyllum, Bl. ... „ 258
  pubescens, *Desf.* ... „ 259
  sumatranum, *W. & A.* ... „ 259
Michelia, *Linn.* ... i. 42
  aurantiaca, Wall. ... „ 42
  Cathcartii, *Hk. f. & T.* ... „ 42
  Champaca, *Linn.* ... „ 42
  Doltsopa, Ham. ... „ 42
  excelsa, *Bl.* ... „ 43
  glauca, Wight ... „ 44
  Kisopa, *Ham.* ... „ 43
  lactea, Wall. ... „ 43
  lanuginosa, *Wall.* ... „ 43
  macrophylla, D. Don ... „ 41
  nilagirica, *Zenk.* ... „ 44
  oblonga, *Wall.* ... „ 43
  ovalifolia, Wight ... „ 44
  pulneyensis, Wight ... „ 44
  punduana, *Hk. f. & T.* ... „ 43
  Rheedii, Wight ... „ 42
  rufinervis, DC. ... „ 42
  velutina, DC. ... „ 43
  Walkeri, Wight ... „ 44
Michelia, Amman... ... iv. 582
  spinosa, Amman ... „ 582
Micranthemum indicum, Hk. f. & T. ... iv. 286
Micranthus oppositifolius, Wendl. ... iv. 417
Micrargeria, *Benth.* ... iv. 303
  Wightii, *Benth.* ... „ 303
Micrechites, *Miq.* ... iii. 670
  elliptica, *Hk. f.* ... „ 671
  polyantha, *Miq.* ... „ 671
Microcalamus Prainii, Gamb. vii. 383
Microcarpæa, *Br.* ... iv. 286
  alterniflora, Bl. ... „ 287
  cochlearifolia, Sm. ... „ 287
  diandra, *Griff.* ... „ 287
  muscosa, *Br.* ... „ 287
  spathulata, Benth. ... „ 288

Vol. Page
Microchites (*see* Microechites)
Microchloa, *Br.* vii. 283
elongata, Br. „ 283
setacea, *Br.* „ 283
Microchlœna flavescens, Garcke i. 371
quinquelocularis, W. & A. „ 371
Microcos Mala, Ham. i. 393
paniculata, Linn. „ 393
Stauntoniana, G. Don „ 393
tomentosa, Sm. „ 393
Microdesmis, *Planch.* v. 380
caseariæfolia, *Planch.* „ 380
Microelus Roeperianus, W. & A. v. 345
Microglossa, *DC.* v. 256, 671
albescens, *Clarke* v. 257, 671
cabulica, Clarke v. 257
Griffithii, Clarke „ 257
volubilis, *DC.* „ 257
zeylanica, *Benth.* „ 257
Microgynæcium, *Hk. f.* v. 9
tibeticum, *Hk. f.* „ 9
Microlæna spectabilis, Wall. i. 371
Microloma angustifolia, Ham. iv. 64
pyrotechnica, Spreng. „ 64
Microlonchus divaricatus, DC. iii. 383
Micromeles, Dcne. ii. 377
castaneifolia, Dcne. „ 379
Griffithii, Dcne. „ 377
khasiana, Dcne. „ 378
rhamnoides, Dcne. „ 377
verrucosa, Dcne. ii. 378, 379
Micromelum, *Bl.* i. 501
hirsutum, *Oliv.* „ 502
monophyllum, Wight „ 510
pubescens, *Bl.* „ 501
Micromeria, *Benth.* iv. 649
biflora, *Benth.* „ 650
capitellata, *Benth.* „ 649
Hydaspidis, *Falc.* „ 650
Malcolmiana, Benth. „ 650
ovata, Beck. „ 650
Micropera, Dalz. vi. 55
Micropera, Lindl. vi. 33
maculata, Dalz. „ 64
pallida, Lindl. vi. 36, 67
pallida, Wall. vi. 36
viridiflora, Dalz. „ 63
Micropiper exiguum, Miq. v. 97
pusillum, Miq. „ 99
Micropora, *Hk. f.* v. 189
Curtisii, *Hk. f.* v. 189, 862
Micropteryx stricta, Walp. ii. 189
suberosa, Walp. „ 189
sublobata, Walp. „ 190
Micropyxis pumila, Duby iii. 506
Micropyxis
tenella, Wight iii. 506
Microrhynchus, Less. iii. 414
acaulis, Kurz „ 396
asplenifolius, DC. „ 415
chondrilloides, Clarke „ 415
fallax, J. & S. „ 416
glaber, Wight „ 396
glomeratus, J. & S. „ 417
nudicaulis, Less. „ 416
patens, DC. „ 403
sarmentosus, DC. „ 416
secundus, Clarke „ 416
Microsaccus, *Bl.* vi. 77
javensis, *Bl.* „ 77
virens, *Hk. f.* „ 77
Microschœnus, *Clarke* vi. 675
Duthiei, *Clarke* „ 675
Microstachys Chamælea, A. Juss. v. 475
Mercurialis, Benth. „ 412
sp., Wall. v. 473, 474
Microstegium Willdenowianum, Nees vii. 117
Microstylis, *Nutt.* v. 686
acutangula, *Hk. f.* „ 688
bella, Rchb. f. „ 688
Bernaysii, Muell. „ 689
biaurita, *Lindl.* „ 687
biloba, Lindl. „ 686
congesta, *Rchb. f.* v. 689, vi. 181
crenulata, *Ridl.* v. 691, vi. 181
cylindrostachya, *Rchb. f.* v. 689
discolor, *Lindl.* „ 689
flavescens, Lindl. „ 690
furcata, *Hk. f.* „ 690
fusca, Rchb. f. v. 689, 690
Josephiana, *Rchb. f.* v. 687
khasiana, *Hk. f.* v. 686, vi. 181
lancifolia, *Thw.* v. 691
luteola, Hk. f. & T. „ 691
luteola, Wight „ 691
Maingayi, *Hk. f.* „ 689
micrantha, *Hk f.* „ 688
muscifera, *Ridl.* „ 689
parvula, *Hk. f.* „ 690
plantaginea, *Steud.* „ 688
polyodon, *Hk. f.* v. 688, vi. 181
pratensis, Ridl. v. 691
purpurea, *Lindl.* „ 687
Rheedii, *Wight* v. 690, vi. 181
Rheedii, Lindl. v. 688
Rheedii, Rchb. f. „ 688
Scottii, *Hk. f.* v. 687, vi. 181
Stocksii, *Hk. f.* v. 691
trilobulata, Kurz „ 689
versicolor, *Wight* „ 691
versicolor, Lindl. v. 690, vi. 181

Microstylis Vol. Page
Wallichii, *Lindl.* ... ... v. 686
Microtinus, Oerst. ... ... iii. 7
Microtropis, *Wall.* ... ... i. 613
bivalvis, *Wall.* ... ... „ 614
coriacea, Wall. ... i. 625, ii. 440
densiflora, *Wight* ... ... i. 614
discolor, *Wall.* ... ... „ 614
latifolia, *Wight* ... .. „ 613
? *longifolia*, Wall. ... i. 613, 625
microcarpa, *Wight* ... ... i. 614
ovalifolia, *Wight* ... ... „ 614
ramiflora, *Wight* ... ... „ 613
Wallichiana, *Wight* ... ... „ 613
Microula, *Benth.* ... ... iv. 167
Benthami, *Clarke* ... ... „ 167
Mikania, *Willd.* ... ... iii. 244
chenopodifolia, Willd. ... „ 244
chenopodioides, Wall. ... „ 354
clematidea, Wall. ... ... „ 243
longicaudis, Wall. ... iii. 244, 671
scandens, *Willd.* ... ... iii. 244
volubilis, Willd. ... ... „ 244
Miliosaccharum, Nees ... ... vii. 69
Milium, *Linn.* ... ... vii. 235
arundinaceum, Koen. ... „ 52
ascendens, Roxb. ... ... „ 235
capillaceum, Koen. ... ... „ 19
capillare, Roth ... ... „ 51
Carar, Ham. ... ... „ 20
cimicinoides, Roxb. ... ... „ 70
cimicinum, Linn. ... ... „ 64
Crus-galli, Mœnch ... ... „ 31
dubium, Jacq. ... ... „ 235
effusum, *Linn.* ... ... „ 235
esculentum, Mœnch ... „ 45
filiforme, Roxb. ... ... „ 18
globosum, Thunb. ... ... „ 25
Languchinia, Ham. ... ... „ 20
laterale, Regel ... ... „ 234
maritimum, Koen. ... ... „ 99
minutiflorum, Trin. ... ... „ 20
orixense, Roxb. ... ... „ 21
ovatum, Heyne ... ... „ 19
Panicum, Mill. ... ... „ 45
phleoides, *Sw.* ... ... „ 235
polystachyum, Spreng. ... „ 20
punctatum, Koen. ... ... „ 19
punctatum, Linn. ... ... „ 20
radiatum, Rottl. ... ... „ 18
ramosum, Retz. ... ... „ 21
sanguinale, Roxb. ... ... „ 19
setaceum, Koen. ... vii. 18, 19
striatum, Ham. ... ... vii. 19
tenerum, Heyne ... ... „ 323
tomentosum, Koen. ... ... „ 51
Treutleri, O. Kuntze vii. 240, 269
triracemosum, Roxb. ... „ 18
Miliusa, *Leschen.* ... ... i. 86
indica, *Leschen.* ... ... „ 86
macrocarpa, *Hk. f. & T.* ... „ 86
montana, Gardn. ... ... „ 86
nilagirica, *Bedd.* ... ... „ 87
Roxburghiana, *Hk. f. & T.* „ 87
velutina, *Hk. f. & T.* ... „ 87
Wallichiana, Hk. f. & T. „ 87
Wightiana, *Hk. f. & T.* ... „ 87
zeylanica, *Gard.* ... ... „ 87
Miliuseæ ... ... i. 47
Millettia, *W. & A.* ... ... ii. 104
atropurpurea, *Benth.* ... „ 108
auriculata, *Baker* ... ... „ 108
Brandisiana, *Kurz* ... ... „ 108
cærulea, *Baker* ... ... „ 107
cana, *Benth.* ... ... „ 105
caudata, *Baker* ... ... „ 109
cinerea, *Benth.* ... ... „ 106
eriantha, *Benth.* ... ... „ 108
extensa, *Benth.* ... ... „ 109
fruticosa, *Benth.* ... ... „ 109
glaucescens, *Kurz* ... ... „ 107
leiogyna, *Kurz* ... ... „ 109
leucantha, Kurz ... ... „ 105
? Maingayi, Baker ... ... „ 110
monticola, *Kurz* ... ... „ 106
ovalifolia, *Kurz* ... ... „ 107
pachycarpa, *Benth.* ... ... „ 106
pallida, Dalz. ... ... „ 105
pendula, Benth. ... ... „ 105
Piscidia, *Wight* ... ... „ 107
pubinervis, *Kurz* ... ... „ 106
pulchra, *Benth.* ... ... „ 104
racemosa, *Benth.* ... ... „ 105
rubiginosa, *W. & A.* ... „ 104
sericea, *W. & A.* ... ... „ 104
splendens, *W. & A.* ... ... „ 104
tetraptera, *Kurz* ... ... „ 106
thyrsiflora, Benth. ... ... „ 246
Millingtonia, *Linn. f.* ... ... iv. 377
hortensis, *Linn. f.* ... ... „ 377
Millingtonia, Roxb. ... ... ii. 3
Arnottiana, Wight ... ... „ 6
dilleniæfolia, Wall. ... ... „ 4
integrifolia, Wall. ... ... „ 4, 5
pinnata, Roxb. ... ... „ 6
pungens, Wall. ... ... „ 4
simplicifolia, Roxb. ... ... „ 5
sumatrana, Jack ... ... „ 6
Milnea apiocarpa, Thw. ... i. 555
edulis, Roxb. ... ... „ 556
? *racemosa*, Roem. ... ... „ 554
Roxburghiana, W. & A. ... „ 555
Roxburghii, Wight ... ... „ 555
sp., Kurz ... ... „ 555
Mimosa, *Linn.* ... ... ii. 291

Mimosa Vol. Page
abstergens, Spreng. ... ... ii. 296
Adenanthera, Roxb. ... ... ,, 286
agrestis, Sieb. ... ... ,, 288
alba, Rottl. ... ... ,, 294
albida, Roxb. ... ... ,, 294
amara, Roxb. ... ... ,, 301
arabica, Lam. ... ... ,, 293
arborea, Thunb. .. ... ,, 300
armata, Rottl. ... ... ,, 291
bigemina, Linn. ... ... ,, 303
biglobosa, Roxb. ... ... ,, 289
cæsia, Linn. ... ... ,, 297
Catechu, Roxb. ... ... ,, 295
catechuoides, Roxb. ... ... ,, 295
cinerea, Linn. ... ... ,, 288
concinna, Willd. ... ... ,, 296
concordiana, Roxb. ... ... ,, 303
cornigera, Linn. ... ... ,, 296
dulcis, Roxb. ... ... ,, 302
dumosa, Roxb. ... ... ,, 296
eburnea, Linn. f. ... ... ,, 293
eburnea, Roxb. ... ... ,, 293
elata, Roxb. ... ... ,, 299
frondosa, Heyne ... ... ,, 294
Farnesiana, Linn. ... ... ,, 292
ferruginea, Rottl. ... ... ,, 297
ferruginea, Roxb. ... ... ,, 295
hamata, *Willd.* ... ... ,, 291
heterophylla, Roxb. ... ... ,, 306
horrida, Sm. ... ... ,, 293
Intsia, Linn. ... ... ,, 297
Jiringa, Jack ... ... ,, 205
Kæringa, Roxb. ... ... ,, 305
Kalkora, Roxb. ... ... ,, 300
Kleinii, Poir. ... ... ,, 294
Latronum, Linn. ... ... ,, 296
leucophlæa, Roxb. ... ... ,, 294
lucida, Roxb. ... ... ii. 299, 303
marginata, Lam. ... ... ii. 299
microphylla, Roxb. ... ... ,, 301
monadelpha, Roxb. ... ... ,, 303
mutabilis, Roxb. ... ... ,, 291
natans, Roxb. ... ... ,, 285
nitida, Vahl ... ... ,, 303
obovata, Roxb. ... ... ,, 296
octandra, Roxb. ... ... ,, 291
odoratissima, Linn. ... ... ,, 299
pedunculata, Roxb. ... ... ,, 289
pennata, Linn. ... ... ,, 297
procera, Roxb. ... ... ,, 299
pudica, *Linn.* ... ... ,, 291
pulchella, Roxb. ... ... ,, 301
rubicaulis, *Lam.* ... ... ,, 291
Rottleri, Spreng. ... ... ,, 291
rugata, Lam. ... ... ,, 296
scandens, Linn. ... . ,, 287
sepiaria, *Benth.* ... ... ,, 291

Mimosa Vol. Page
Sirissa, Roxb. ... ... ii. 298
Smithiana, Roxb. ... ... ,, 300
speciosa, Jacq. ... ... ,, 298
spinosiliqua (*spinosisiliqua*) Rottl. ... ... ,, 291
stipulacea, Roxb. ... ... ,, 300
Suma, Roxb. ... ... ,, 294
Sundra, Roxb. ... ... ,, 295
tamariscina, Heyne ... ... ,, 294
tenuifolia, Roxb. ... ... ,, 297
tomentosa, Roxb. ... ... ,, 294
torta, Roxb. ... ... ,, 297
trapezifolia, Roxb. ... ... ,, 305
triquetra, Vahl ... ... ,, 286
umbellata, Vahl ... ... ,, 303
virgata, Linn. . ... ,, 290
xylocarpa, Roxb. ... ... ,, 286
MIMOSEÆ ... ... ii. 61
Mimulus, *Linn.* ... ... iv. 258
assamicus, Griff. ... ... ,, 258
gracilis, *Br.* ... ... ,, 259
hirsutus, Bl. ... ... ,, 278
javanicus, Bl. ... ... ,, 279
nepalensis, *Benth.* ... ... ,, 258
orbicularis, *Benth.* ... ... ,, 259
strictus, Benth. ... ... ,, 259
? *tenellus*, Bunge ... ... ,, 259
Mimusops, *Linn.* ... ... iii. 548
? *attenuata*, Wall. ... ... ,, 537
Balota, Bl. ... ... ,, 549
Browniana, Benth. ... ... ,, 549
dissecta, Br. ... ... ,, 549
Elengi, *Linn.* ... ... ,, 548
hexandra, *Roxb.* ... ... ,, 549
Hookeri, A. DC. ... ... ,, 549
indica, A. DC. ... ... ,, 549
indica, Kurz ... ... ,, 549
Kauki, *Linn.* ... . ,, 549
Kauki, Wall. ... ... ,, 549
littoralis, *Kurz* ... ... ,, 549
lucida, Wall. ... ... ,, 547
Manilkara, G. Don ... ... ,, 534
Roxburghiana, *Wight* ... ,, 548
Minyranthes heterophylla, Turcz. ... ... iii. 304
Miquelia, *Meissn.* ... ... i. 593
assamica, Bl. ... ... ,, 593
dentata, *Bedd.* ... ... ,, 593
? **gibba**, *Baill.* ... ... ,, 594
Kleinii, *Meissn.* ... ... ,, 593
Miquelia, Bl. ... ... vii. 242
courtallensis, Arn. ... ... ,, 244
elata, Arn. ... ... ,, 242
Emodi, Arn. & Nees ... ,, 243
MIRABILEÆ ... ... iv. 708
Miscanthus, *Anders.* ... ... vii. 107
cotulifer, Benth. ... ... ,, 108

Miscanthus Vol. Page
fuscus, Benth. ... vii. 120
nepalensis, *Hack.* ... „ 107
nudipes, *Hack.* ... „ 107
sinensis, Anderss. ... „ 118
Mischocarpus sumatranus, Bl. i. 679
sundaicus, Bl. ... „ 678
Mischodon, *Thw.* ... v. 344
zeylanicus, *Thw.* ... „ 344
Mischospora efoliata, Boeck. vi. 631
Missiessya hypoleuca, Wedd v. 591
velutina, Wedd. ... , 590
Wallichiana, Wedd. ... „ 591
Mitopetalum Wightii, Bl. ... v. 821
speciosum, Bl. ... „ 822
Mitrasacme, *Labill.* ... iv. 79
alsinoides, *Br.* ... „ 80
capillaris, Wall. ... „ 80
chinensis, Griseb. ... „ 80
crystallina, Griff. ... „ 80
indica, Wight ... „ 80
malaccensis, Wight ... „ 80
nudicaulis, *Reinw.* ... „ 80
polymorpha, *Br.* ... „ 80
pusilla, Dalz. ... „ 80
trinervis, Span. ... „ 80
Mitreola, *Linn.* ... iv. 79
inconspicua, Zoll. & Morr. „ 79
oldenlandioides, *Wall.* ... „ 79
paniculata, Wall. ... „ 79
pedicellata, *Benth.* ... „ 79
petiolata, A. DC. ... „ 79
Mitrephora, *Bl.* ... i. 76
? excelsa, *Hk. f. & T.* ... „ 77
grandiflora, *Bedd.* ... „ 78
Heyneana, *Thw.* ... „ 77
Maingayi, *Hk. f. & T.* ... „ 77
obtusa, *Bl.* ... „ 76
reticulata, *Hk. f. & T.* ... „ 77
tomentosa, *Hk. f. & T.* ... „ 76
MITREPHOREÆ ... i. 46
Mitrosicyos lobatus, Maxim. ii. 633
Mnesithea laevis, Kunth ... vii. 158
Mnianthus longipes, Walp. ... v. 63
pulchellus, Walp. ... „ 62
zeylanicus, Walp. ... „ 62
Mniopsis Hookeriana, Tul. ... v. 66
Johnsonii, Wight ... „ 66
selaginoides, Bedd. ... „ 68
Moacurra gelonioides, Roxb. i. 570
Modecca, *Lam.* ... ii. 601
aliena, Wall. ... „ 603
apiculata, *Mast.* ... „ 603
cardiophylla, *Mast.* ... „ 602
cordifolia, *Bl.* ... „ 602
diversifolia, Wall. ... „ 601
furfuracea, Wall. ... „ 603
? *heterophylla*, Kurz ... „ 602
Modecca Vol. Page
integrifolia, Lam. ... ii. 603
integrifolia, Wall. ... „ 603
nicobarica, *Kurz* ... „ 603
palmata, *Lam.* ... „ 603
populifolia, *Bl.* ... „ 603
singaporeana, *Mast.* ... „ 601
trilobata, *Roxb.* ... „ 602
tuberosa, Roxb. ... „ 603
Wightiana, *Wall.* ... „ 601
MODECCEÆ ... ii. 599
Modeccopsis vaga, Griff. ... i. 578
Mogorium pubescens, Lamk. iii. 592
Sambac, Lamk. ... „ 591
triflorum, Lamk. ... „ 598
undulatum, Lamk. ... „ 591
vimineum, Lamk. ... „ 598
Mohlana nemoralis, Mart. ... v. 21
Molina racemosa, Lamk. ... i. 418
Molinæa canescens, Roxb. ... i. 671
sp., Wall. ... „ 678
Molineria capitulata, Herb. vi. 278
crassifolia, Baker ... „ 279
Finlaysoniana, Baker ... „ 279
gracilis, Kurz ... „ 278
latifolia, Kurz ... „ 280
plicata, Colla ... „ 278
plicata, Kurz ... „ 280
recurvata, Herb. ... „ 278
sumatrana, Herb. ... „ 280
Molinia aquatica, Wibel. ... vii. 310
cœrulea, Mœnch ... i. 273
Mollia corymbosa, Willd. ... i. 245
spadicea, Willd. ... „ 245
MOLLUGINEÆ ... ii. 659
Mollugo, *Linn.* ... ii. 662
bellidiflora, Ser. ... „ 664
Cerviana, *Ser.* ... „ 663
disticha, *Ser.* ... „ 663
Glinus, A. Rich. ... „ 662
hirta, *Thunb.* ... „ 662
Linkii, Ser. ... „ 663
lotoides, W. & A ... „ 662
nudicaulis, *Lamk.* ... „ 664
parviflora, DC. ... „ 662
pentaphylla, Linn. ... „ 663
Spergula, *Linn.* ... „ 662
stricta, *Linn.* ... „ 663
triphylla, Lour. ... „ 663
umbellata, Ser. ... „ 663
verticillata, Roxb. ... „ 662
Moltkia, *Lehm.* ... iv. 171
parviflora, *Clarke* ... „ 171
Molucella Marrubiastrum, Steph. ... iv. 671
Momordica, *Linn.* ... ii. 616
Balsamina, *Linn.* ... „ 617
Balsamina, Wall. ... „ 617

Momordica Vol. Page
calcarata, Colebr., see Errata
calcarata, Wall. ... ... ii. 631
Charantia, *Linn.* ... ... „ 616
cochinchinensis, *Spreng.* „ 618
Cymbalaria, *Fenzl* ... ... „ 618
denudata, *Thw.* ... ... „ 618
dioica, *Roxb.* ... ... „ 617
dioica, Wall. ... ... „ 618
Hamiltoniana, Wall. ... „ 617
Heyneana, Wall. ... ... „ 617
humilis, Wall. ... ... „ 617
Luffa, Linn. ... ... „ 614
Missionis, Wall. ... ... „ 617
mixta, Roxb. ... ... „ 618
monadelpha, Roxb. ... ... „ 621
muricata, DC. ... ... „ 617
Paina, Wall. ... ... „ 633
renigera, Wall. ... ... „ 617
senegalensis, Lamk. ... ... „ 617
subangulata, Bl. ... ... „ 617
tubiflora, Roxb. ... ... „ 611
tubiflora, Wall. ... ... „ 615
umbellata, Roxb. ... ... „ 625
Wallichii, Roem. ... ... „ 617
Monarda zeylanica, Burm. ... iv. 672
MONARDEÆ ... ... iv. 606
Monenteles spicatus, Labill. iii. 275
Monerma repens, Beauv. ... vii. 365
Monetia barlerioides, L'Hérit. iii. 620
Brunoniana, Wall. ... ... „ 620
laxa, Planch. ... ... „ 620
sarmentosa, Baill. ... ... „ 620
tetracantha, Salisb. ... ... i. 425
MONIMIACEÆ ... ... v. 114
Monocera, Jack ... ... i. 404
ferruginea, Jack ... i. 406, 409
ferruginea, Wight ... ... i. 406
glandulifera, Hook. ... ... „ 407
Griffithii, C. Müll. ... ... „ 407
Griffithii, Wight ... ... „ 408
holopetala, Turcz., lapsu Zoll. ... ... „ 408
leucobotryum, Miq. ... ... „ 407
macrocera, Turcz., lapsu Zoll. ... ... „ 405
Munroii, Wight ... ... „ 407
petiolata, Jack ... ... „ 408
petiolata, Miq. ... ... „ 408
Roxburghii, Wight ... ... „ 405
subintegerrima, Miq. ... „ 405
trichanthera, Griff. ... ... „ 403
tuberculata, W. & A. ... „ 405
Walkerii, Wight ... ... „ 406
Monochilus, Wall. ... ... vi. 107
affinis, Lindl. ... ... „ 109
affinis, Wight ... ... „ 108
flabellatus, Wight ... ... „ 106

Monochilus Vol. Page
flavus, Wall. ... ... vi. 108
galeatus, Lindl. ... ... „ 107
longilabris, Lindl. ... ... „ 108
nervosus, Wall. ... ... „ 108
regius, Lindl. ... ... „ 108
Monochoria, *Presl* ... ... vi. 362
dilatata, Kunth ... ... „ 362
hastæfolia, *Presl* ... ... „ 362
hastata, Solms ... ... „ 362
linearis, Miq. ... ... „ 363
pauciflora, Kunth & Miq. „ 363
sagittata, Kunth ... ... „ 362
vaginalis, *Presl* ... ... „ 363
Monocyclis robusta, Wall. ... i. 565
Monolophus, Wall. ... ... vi. 222
elegans, Wall. ... ... „ 222
linearis, Wall. ... ... „ 223
scaposus, Dalz. ... ... „ 224
secundus, Wall. ... ... „ 223
Monomeria, *Lindl.* ... ... v. 781
barbata, *Lindl.* ... ... „ 781
Crabro, Par. & Rchb. f. ... „ 781
Monoon canangioides, Miq. ... i. 64
Monophyllæa, *Br.* ... ... iv. 369
Horsfieldii, *Br.* ... ... „ 370
Monoporandra, *Thw.* ... ... i. 316
cordifolia, *Thw.* ... i. 303, 317
elegans, *Thw.* ... ... i. 317
lancifolia, Thw. ... ... „ 316
Monosoma littorata, Griff. ... i. 567
Monotheca mascatensis, A. DC. iii. 534
Monothecium, *Hochst.* ... iv. 523
aristatum, *T. Anders.* ... „ 524
Monotropa, *Linn.* ... ... iii. 476
Morisoniana, Michx. ... „ 476
uniflora, *Linn.* ... ... „ 476
sp., Griff. ... ... „ 476
MONOTROPEÆ ... ... iii. 476
Monoxora spectabilis, Wight ii. 469
Monsonia, *Linn.* ... ... i. 427
chumbalensis, Wight ... „ 427
heliotropioides, *Cav.* ... „ 428
heterotricha ... ... „ 435
Lawiana, *Stocks* ... ... „ 427
mallica, Edgew. ... ... „ 428
senegalensis, *Guill. & Perr.* ... ... i. 427, 435
Monstera decursiva, Schott vi. 547
gigantea, Schott ... ... „ 548
glauca, C. Koch ... ... „ 547
Peepla, Schott ... ... „ 545
pinnatifida, Schott ... ... „ 549
Moonia Arnottiana, Wight ... iii. 303
heterophylla, Arn. .. ... „ 303
Moorcroftia adpressa, Chois. iv. 196
penangiana, Chois. ... ... „ 196
Moorva, As. Res. ... ... vi. 271

Vol. Page
Moræa chinensis, Murr. ... vi. 277
MOREÆ ... ... v. 478; vi. 271
Morgania aspera, Spreng. ... iv. 279
hyssopioides, Spreng. ... „ 283
juncea, Spreng. ... ... „ 274
lucida, Spreng. ... ... „ 279
Moricandia, *DC.* ... ... i. 158
arvensis, *DC.* ... ... „ 158
tortuosa, *Hk. f. & T.* ... „ 158
Morina, *Linn.* ... ... iii. 216
Aucheri, J. & S. ... ... „ 216
betonicoides, *Benth.* ... „ 217
breviflora, Edgew. ... ... „ 216
Coulteriana, *Royle* ... ... „ 216
elegans, Fisch. & Lallem. „ 216
græca, J. & S. ... ... „ 216
longifolia, *Wall.* ... ... „ 216
nana, Wall. ... ... „ 217
nepalensis, *D. Don* ... ... „ 217
persica, *Linn.* ... ... „ 216
polyphylla, *Wall.* ... ... „ 216
Tournefortii, J. & S. ... „ 216
Wallichiana, Royle ... „ 216
Morinda, *Linn.* ... ... iii. 155
angustifolia, *Roxb.* ... ... „ 156
angustifolia, Roth ... ... „ 156
aspera, W. & A. ... ... „ 156
bracteata, Roxb. ... ... „ 156
Chacuca, Ham. ... ... „ 156
citrifolia, *Linn.* ... iii. 155, 156
citrifolia, Bedd. ... ... iii. 156
Coreia, Ham. ... ... „ 156
exserta, Roxb. ... ... „ 156
lanceolata, Wall. ... ... „ 157
leiantha, Kurz ... ... „ 156
multiflora, Roxb. ... ... „ 156
Naudia, Ham. ... ... „ 156
nodosa, Ham. ... ... „ 156
Padavara, Juss. ... ... „ 157
persicæfolia, *Ham.* ... ... „ 157
polysperma, Jack ... ... „ 93
rigida, *Miq.* ... ... „ 157
scandens, Roxb. ... ... „ 157
speciosa, Wall. ... ... „ 158
squarrosa, Ham. ... ... „ 157
stenophylla, Spreng. ... „ 156
tetrandra, Jack ... ... „ 157
Teysmanniana, Miq. ... „ 156
tinctoria, *Roxb.* ... ... „ 156
tomentosa, Heyne ... ... „ 156
umbellata, *Linn.* ... ... „ 157
villosa, *Hk. f.* ... ... „ 158
Wallichii, *Kurz* ... ... „ 158
Zollingeriana, Miq. ... ... „ 156
sp., Wall. ... iii. 94, 121, 156, 157, 158, 172
MORINDEÆ ... ... iii. 20, 155

Vol. Page
Morindopsis, *Hk. f.* ... ... iii. 121
capillaris, *Kurz* ... ... „ 121
Moringa, *Lamk.* ... ... ii. 45
concanensis, *Nimm.* ... „ 45
oleifera, Lamk. ... ... „ 45
polygona, DC. ... ... „ 45
pterygosperma, Grtn. ... „ 45
zeylanica, Pers. ... ... „ 45
MORINGEÆ ... ... ii. 45
Morisia Wallichii, Nees ... vi. 668
Morocarpus angustatus (angulatus), Bl. ... ... v. 590
longifolius, Bl. ... ... „ 590
microcephalus, Benth. ... „ 590
salicifolius, Bl. ... ... „ 591
Wallichianus, Kurz ... ... „ 591
Wallichianus, Thw. ... ... „ 592
Morus, *Linn.* ... ... v. 491
? *acidosa*, Griff. ... ... „ 492
alba, *Linn.* ... ... „ 492
alba, Bureau ... ... „ 492
atropurpurea, Roxb. ... „ 491
bifaria, Hort. Calc. ... ... „ 493
Cudranus, Ham. ... ... „ 538
cuspidata, Wall. ... ... „ 492
glabrata, Wall. ... ... „ 493
indica, *Linn.* ... ... „ 492
lævigata, *Wall.* ... ... „ 492
pabularia, Dcne. ... ... „ 492
paniculata, Roxb. ... ... „ 589
parvifolia, Royle ... ... „ 492
serrata, *Roxb.* ... ... „ 492
serrata, Wall. ... ... „ 492
tatarica, Linn. ... ... „ 492
vicorum, Jacquem. ... ... „ 492
viridis, Ham. ... ... „ 493
Moschosma, *Rchb.* ... ... iv. 612
ocimoides, Rchb. ... ... „ 647
polystachyum, *Benth.* ... „ 612
Mosla, *Ham.* ... ... iv. 646
dianthera, *Maxim.* ... ... „ 647
ocimoides, Ham. ... ... „ 647
Moulinsia cupanioides, Camb. i. 672
rubiginosa, G. Don ... ... „ 672
Mucuna, *Adans.* ... ... ii. 185
acuminata, *Grah.* ... ... „ 185
anguina, Wall. ... ... „ 185
atropurpurea, *DC.* ... ... „ 186
bracteata, *DC.* ... ... „ 186
capitata, *W. & A.* ... ... „ 187
corymbosa, Grah. ... ... „ 185
cristata, Ham. ... ... „ 185
gigantea, *DC.* ... ... „ 186
? *gracilis*, Grah. ... ... „ 193
hirsuta, *W. & A.* ... ... „ 187
imbricata, *DC* ... ... „ 185
macrocarpa, *Wall.* ... ... „ 186

Mucuna Vol. Page
monosperma, *DC.* ... ... ii. 185
monosperma, Wall. ... ... „ 185
nigra, Ham. ... ... „ 188
nivea, *DC.* ... . „ 188
pruriens, *DC.* ... ... „ 187
prurita, Hook. ... ... „ 187
recta, Wall. ... ... „ 207
utilis, Wall. ... ... „ 187
velutina, Hassk. ... ... „ 187
Muehlenbergia, *Schreb.* . vii. 258
Duthieana, Hack. ... ... „ 259
geniculata, Nees ... ... „ 259
himalayensis, *Hack.* ... „ 259
Huegelii, Trin. ... ... „ 259
sylvatica, *Torr. & Gr.* ... „ 259
viridissima, *Nees* ... ... „ 259
Mukia, *Arn.* ... ... ii. 623
leiosperma, *Thw.* ... ... „ 623
maderaspatana, Kurz ... „ 623
scabrella, *Arn.* ... . „ 623
Muldera diandra, Thw. ... v. 91
galeata, Miq. ... ... „ 80
multinervis, Miq. ... ... „ 91
trichostachya, Miq. ... ... „ 80
Wightiana, Miq. ... ... „ 91
Wightiana, Wight ... ... „ 80
Mulgedium cyaneum, DC. ... iii. 408
decipiens, Hk. f. & T. ... „ 407
lævigatum, DC. ... ... „ 408
Lessertianum, DC. ... ... „ 409
macranthum, Hk. f. & T. „ 409
macrorhizum, Royle... ... „ 408
nilgherryense, Wight ... „ 408
rapunculoides, DC. ... ... „ 407
robustum, DC. ... ... „ 408
rostratum, Schultz ... ... „ 406
sagittatum, Royle ... ... „ 405
Munbya cyanochroa, Boiss. iv 177
Mundulea, *DC.* ... ... ii. 110
pulchra, Benth. ... ... „ 105
suberosa, *Benth.* ... ... „ 110
Munnicksia, Dennstd. ... ... i. 196
Munronia, *Wight* ... ... i. 542
neilgherrica, Wight ... ... „ 543
pumila, *Wight* ... ... „ 543
Wallichii, *Wight* ... ... „ 543
Murdannia tuberosa, Royle... vi. 375
Muricia cochinchinensis, Lour. ... ... ii. 618
Murraya, *Linn.* ... ... i. 502
brevifolia, Thw. ... ... „ 503
Burmanni, Spreng. ... ... „ 504
crenulata, Oliv. ... ... „ 501
elongata, A. DC. ... ... „ 503
exotica, *Linn.* ... ... „ 502
exotica, Reinw. ... ... „ 554
exotica, Thw. ... ... „ 503
Murraya Vol. Page
Glenieii, Thw. ... ... i. 503
Kœnigii, *Spreng.* ... ... „ 503
paniculata, Jack ... ... „ 503
sumatrana, Roxb. ... ... „ 503
Musa, *Linn.* ... ... vi. 261
arakanensis, Ripley ... ... „ 263
assamica, *Hort. Bull.* ... „ 263
aurantiaca, *Mann.* ... ... „ 263
Champa, Hort. ... ... „ 262
Cliffortiana, Linn. ... ... „ 262
coccinea, Andr. ... ... „ 263
corniculata, Kurz ... ... „ 263
Dacca, Horan ... ... „ 262
dasycarpa, *Kurz* ... ... „ 263
glauca, *Roxb.* ... ... „ 262
Mannii, *Wendl.* ... ... „ 263
nepalensis, *Wall.* ... ... „ 261
ornata, Roxb. .. .. „ 263
paradisiaca, Linn. ... ... „ 262
rosacea, *Jacq.* ... ... „ 263
sanguinea, *Hk. f.* ... ... „ 263
sapientum, *Linn.* ... ... „ 262
sikkimensis, Kurz ... ... „ 262
simiarum, Kurz ... ... „ 262
superba, *Roxb.* ... ... „ 261
textilis, *Nees* ... ... „ 263
textilis, Grah. ... ... „ 261
troglodytarum, Linn. ... „ 262
uranoscopos, Lour. ... ... „ 263
velutina, *Wendl.* ... ... „ 263
vittata, W. Ackm. ... ... „ 263
zebrina, Van Houtte ... „ 263
Muscari bootanense, Griff. ... vi. 299
MUSEÆ ... ... vi. 200
Mussænda, *Linn.* ... ... iii. 86
calycina, Wall. ... ... „ 89
cordifolia, *Wall.* ... ... „ 91
corymbosa, *Roxb.* ... ... „ 91
? corymbosa, Kurz ... ... „ 87
? corymbosa, Roxb. ... ... „ 89
? corymbosa, Wall. ... ... „ 87
cuneifolia, D. Don ... iii. 34, 92
Dovinia (*Dorinia*), Ham.... iii. 89
flavescens, Ham. ... ... „ 89
formosa, Linn. ... ... „ 89
frondosa, *Linn.* ... ... „ 89
frondosa, Wall. ... ... iii. 87, 89
glabra, *Vahl* ... ... iii. 90
glabra, Wall. ... ... „ 88
Griffithii, *Wight* ... ... „ 88
hispida, D. Don ... ... „ 89
incana, *Wall.* ... ... „ 87
ingrata, Wall. ?... ... ... „ 89
Jelinekii (*Jelinckii*), Kurz „ 88
Keenani, *Hk. f.*... ... ... „ 87
longifolia, Wall. ... ... „ 88
Luculia, Ham. ... ... „ 36

Mussænda ... Vol. Page
macrophylla, *Kurz* ... ... iii. 91
macrophylla, *Wall.* ... ... „ 89
? *macrophylla*, Kurz ... „ 90
parva, *Wall.* ... ... „ 91
pavettæfolia, *Kurz* ... ... „ 91
penangensis, Miq. ... ... „ 90
pubescens, Ham. ... ... „ 87
? *pubescens*, Wall. ... ... „ 87
repens, Wall. ... ... „ 84
Roxburghii, *Hk. f.* ... ... „ 87
setulosa, Klotz. ... ... „ 91
tomentosa, *Wight* ... ... „ 88
tomentosa, Wight ... ... „ 90
uniflora, *Wall.* ... ... „ 86
variolosa, *Wall.* ... ... „ 90
villosa, *Wall.* ... ... „ 91
villosa, Schlecht. ... ... „ 90
villosa, Wall. ... ... „ 89
Wallichii, *G. Don* ... ... „ 88
zeylanica, Burm. ... ... „ 89
sp., Hk. f. & T. ... ... „ 87
MUSSÆNDEÆ ... ... iii. 19, 86
MUTISIACEÆ ... ... iii. 225, 386
Mycaranthes, *Bl.* ... ... v. 785
obliqua, Lindl. ... ... „ 790
stricta, Lindl. ... ... „ 791
Mycetia cauliflora (lapsu *javanica*), Reinw. ... ... iii. 95
Mygalurus caudatus, Link ... vii. 356
Myoda rufesces, Lindl. ... vi. 101
Myonima multiflora, Ait. ... ii. 462
Myosotis, *Linn.* ... ... iv. 173
arvensis, *Hoffm.* ... ... „ 173
barbata, Bieb. ... ... „ 163
cæspitosa, *Schultz* ... ... „ 173
echinophora, Pallas ... ... „ 162
Hookeri, *Clarke* ... ... „ 174
intermedia, Link ... ... „ 174
lingulata, Lehm. ... ... „ 173
longiflora, Wall. ... ... „ 171
microcarpa, Wall. ... ... „ 172
montana, Besser ... ... „ 173
multicaulis, Wall. ... ... „ 172
ovalifolia, Wall. ... ... „ 172
pallens, Wall. ... ... „ 173
palustris, Benth. ... ... „ 173
racemosa, Benth. ... ... „ 171
robusta, *D. Don* ... ... „ 174
rotundifolia, Wall. ... ... „ 172
stricta, *Link* ... ... „ 174
sylvatica, *Hoffm.* ... ... „ 173
tenuiflora, Viv. ... ... „ 175
villosa, Ledeb. ... ... „ 165
Myriachæta arundinacea, Zoll. & Mor. ... ... vii. 61
glauca, Mor. ... ... „ 61
Myriactis, *Less.* ... ... iii. 247

Myriactis ... Vol. Page
carnosa, Wall. ... ... iii. 247
Gmelini, DC. ... ... „ 247
gracilis, Edgew. ... ... „ 247
javanica, DC. ... ... „ 247
nepalensis, *Less.* ... ... „ 247
oleosa, Edgew. ... ... „ 247
Wallichii, *Less.* ... ... „ 247
Wightii, *DC.* ... ... „ 247
Myrialepis, *Becc.* ... ... vi. 480
Scortechini, *Becc.* ... ... „ 480
triqueter, Becc. ... ... „ 480
Myrica, *Linn.* ... ... v. 597
canarensis, Miq. ... ... „ 266
Farquhariana, Wall. ... „ 597
integrifolia, Roxb. ... ... „ 597
integrifolia, Wall. ... ... „ 113
missions, Wall. ... ... „ 597
Nagi, *Thunb.* ... ... „ 597
rubra, Sieb. & Zucc. ... „ 597
sapida, Wall. ... ... v. 113, 597
triplinervis, Miq. ... ... v. 266
MYRICACEÆ ... ... v. 597
Myricaria, *Desv.* ... ... i. 249
bracteata, Royle ... ... „ 250
elegans, *Royle* ... ... „ 250
germanica, *Desv.* ... ... „ 250
Hoffmeisteri, Klotz. ... ... „ 250
prostrata, Benth. & Hk. f. „ 250
vaginata, Desv. ... ... „ 249
Myriogyne minuta, Less. ... iii. 317
Myrioneuron, *Wall.* ... ... iii. 96
angustifolium, *Hk. f.* ... „ 97
Clarkei, *Hk. f.* ... ... „ 96
nutans, *Wall.* ... ... „ 96
Myriophyllum, *Linn.* ... ... ii. 432
indicum, *Willd.* ... ... „ 433
indicum, Griff. ... ... „ 432
indicum Wight. ... ... „ 433
intermedium, *DC.* ... ... „ 433
intermedium, Wight ... ... „ 432
lineare, Hayne ... ... „ 433
spicatum, *Linn.* ... ... „ 433
tetrandrum, Roxb. ... ... „ 433
tuberculatum, *Roxb.* ... „ 432
variæfolium, Hook ... ... „ 433
verticillatum, *Linn.* ... ... „ 433
Myriopteron, *Griff.* ... ... iv. 10
Horsfieldii (error = seq.) ... „ 11
paniculatum, *Griff.* ... ... „ 11
Myriostachya, *Hk. f.* ... vii. 327, 421
Wightiana, *Hk. f.* ... „ 297, 327
Myristica, *Linn.* ... ... v. 102, 858
amygdalina, *Wall.* ... ... v. 106
amygdalina, Grah. ... ... „ 111
andamanica, *Hk. f.* ... ... „ 103
? *angustifolia*, Roxb. ... ... „ 111
aromatica, Lamk. ... ... „ 102

Myristica Vol. Page
attenuata, *Wall.* ... v. 110
bivalvis, *Hk. f.* ... „ 107
Cantleyi, *Hk. f.* ... „ 110
ceylanica, A. DC. ... „ 103
corticosa, Bedd. ... „ 111
corticosa, Hk. f. & T. ... v. 110, 111
crassifolia, *Hk. f. & T.* ... v. 108
dactyloides, Wall. ... „ 108
diospyrifolia, A. DC. ... „ 103
elliptica, *Wall.* ... „ 102
? *elliptica*, Kurz ... „ 103
erratica, Hk. f. & T. ... „ 110
eugeniæfolia, A. DC. ... „ 113
exaltata, Wall. ... v. 107, 109
Farquhariana, *Wall.* ... v. 108
ferruginea, Wall. ... „ 106
Finlaysoniana, *Wall.* ... „ 113
floribunda, Wall. ... „ 107
fragrans, *Houtt.* ... „ 102
furfuracea, *Hk. f. & T.* ... „ 112
gibbosa, *Hk. f. & T.* ... „ 112
glabra, *Bl.* ... „ 107
glauca, Bl. ... „ 111
glaucescens, *Hk. f. & T.* ... „ 111
glaucescens, Wall. ... v. 113, 161
globularia, Hk. f. & T. ... v. 108
Griffithii, *Hk. f.* ... „ 109
Heyneana, Wall. ... „ 113
Hookeri, Wall. ... „ 113
Hookeriana, *Wall.* ... „ 109
Horsfieldii, *Bl.* ... „ 106
Horsfieldii, Bl. ? ... v. 106, 108
hyposticta, Miq. ... v. 104
iners, Bl. ... „ 113
integra, Wall. ... „ 107
integrifolia, Steud. ... „ 113
intermedia, *Bl.* ... „ 112
Irya, *Gaertn.* ... „ 109
Iryadghedi, Gaertn. ... „ 106
javanica, Bl. ... „ 109
Kingii, *Hk. f.* ... „ 106
lanceolata, Wall. ... „ 111
laurifolia, *Hk. f. & T.* ... „ 103
laurina, *Bl.* ... „ 112
? *linifolia*, Roxb. ... „ 110
longifolia, *Wall.* ... „ 110
longifolia, Hk. f. & T. ... v. 110, 113
magnifica, *Bedd.* ... v. 104
Maingayi, *Hk. f.* ... „ 104
malabarica, *Lamk.* ... „ 103
malaccensis, *Hk. f.* ... „ 104
micrantha, Wall. ... „ 113
missionis ?, Wall. ... „ 111
montana, Roxb. ... „ 113
moschata, Thunb. ... „ 102
Murtoni, *Hk. f.* ... „ 105
notha, Wall. ... „ 103

Myristica Vol. Page
? *obtusifolia*, Wall. ... v. 113
officinalis, Linn. f. ... „ 102
paniculata, A. DC. ... „ 108
pendulina, *Hk. f.* ... „ 859
polyspherula, *Hk. f.* ... „ 108
sapida, Steud. ... „ 113
sesquipedalis, *Wall.* ... v. 113, 151
sphærocarpa, Wall. ... v. 109
sphærula, *Hk. f.* ... „ 859
? *sumatrana*, Bl. ... „ 111
superba, *Hk. f. & T.* ... „ 105
sylvestris, Houtt. ... „ 859
tomentosa, *Hk. f. & T.* ... „ 105
tomentosa, Bl. ... „ 112
? *tomentosa*, Grah. ... „ 103
tomentosa, Thw. ... „ 103
Wallichii, *Hk. f. & T.* ... „ 105
zeylanica, Thw. ... „ 103
sp., Wall. ... „ 113
sp., Malacca ... „ 113
sp., Singapore ... „ 113
Myristicacea, Wall. ... v. 105
Myristicea, Wall. ... v. 381
MYRISTICEÆ ... v. 101
Myrmechis glabra, Bl. ... vi. 98
Myrmecodia, *Jack* ... iii. 194
armata, *DC.* ... „ 194
? *echinata*, Gaud. ... „ 194
? *tuberosa*, Bl. ... „ 194
Myrobalanus bellirica (belerica) Gaertn. ... ii. 445
Chebula, Gaertn. ... „ 446
citrina, Gaertn. ... „ 446
Myrsine, *Linn.* ... iii. 511
acuminata, Royle ... „ 511
africana, *Linn.* ... „ 511
avenis, A. DC. ... „ 512
bifaria, Wall. ... „ 511
capitellata, *Wall.* ... „ 512
excelsa, D. Don ... „ 512
glabra, Gaertn. ... „ 511
khasiana, Kurz ... „ 512
lanceolata, Wall. ... „ 512
lepidocarpon, Wight ... „ 512
lucida, Wall. ... „ 512
Myrtillus, Hk. ... „ 516
neriifolia, Sieb. & Zucc. ... „ 512
pachysandra, Wall. ... „ 531
philippensis, A. DC. ... „ 512
Porteriana, Wall. ... „ 512
Potama, D. Don ... „ 511
retusa, Ait. ... „ 511
rotundifolia, Lamk. ... „ 511
scabra, Gaertn. ... „ 511
semiserrata, *Wall.* ... „ 511
sessilis, D. Don ... „ 511
subspinosa, D. Don ... „ 512

Myrsine Vol. Page
theæfolia, Wall. i. 601, iii. 512
umbellulata, A. DC. ... iii. 512
? *undulata*, Wall. ... ,, 516
Wightiana, Wall. ... ,, 512
MYRSINEÆ ... iii. 507
MYRTACEÆ ... ii. 462
MYRTEÆ ... ii. 463
Myrtus acuminatissima, Bl. ii. 483
amboinensis, Rumph. ... ,, 464
androsæmoides, Poir. ... ,, 462
bracteata, Willd. ... ,, 502
braziliana, Linn. ... ,, 505
canescens, Lour. ... ,, 469
caryophyllata, Linn. ... ,, 490
Commersonii, Spreng. ... ,, 501
communis, Linn. ... ,, 462
coromandeliana, Koen. ... ,, 502
cotinifolia, Spreng. ... ,, 501
Cumini, Linn. ... ,, 499
cymosa, Bl. ... ,, 496
cymosa, Spreng. ... ,, 482
densiflora, Bl. ... ,, 473
Heynei, Spreng. ... ,, 502
Jambos, Kunth ... ,, 474
javanica, Bl. ... ,, 473
latifolia, Heyne ... ,, 502
laurina, Retz. ... iii. 573
Leucadendron, Linn. ... ii. 465
lineatas, Bl. ... ,, 487
littoralis, Roxb. ... ,, 502
macrophylla, Spreng. ... ,, 472
malaccensis, Spreng. ... ,, 472
quadrangularis, Ham. ... ,, 486
ruscifolia, Willd. ii. 486, 502
saligna, Gmel. ... ,, 465
smilacifolia, Wall. ... ,, 468
Soneratii, Spreng. ... ,, 485
spicata, Ham. ... ,, 502
tomentosa, Ait. ... ,, 469
trinervia, Sm. ... ,, 468
zeylanica, Linn. ... ,, 485
Mystacidium, *Lindl.* ... vi. 78
zeylanicum, *Trim.* ... , 78
Myxopyrum, *Bl.* ... iii. 617
nervosum, *Bl.* ... ,, 618
smilacifolium, *Bl.* ... ,, 618
Myrospermum chylocarpum, Rœm. ... i. 500

Nageia bracteata, Kurz. ... v. 650
japonica, Gaertn. ... ,, 597
latifolia, Gord. ... ,, 649
Putranjiva, Roxb. ... ,, 337
NAIADACEÆ ... vi. 562
Naias, *Linn.* ... vi. 568
dichotoma, Roxb. ... ,, 569
falciculata, *A. Braun* ... ,, 569
Naias Vol. Page
fucoides, Griff. ... vi. 569
graminea, *Del.* ... ,, 569
heteromorpha, *Griff.* ... ,, 570
indica, Cham. ... ,, 569
major, *Allioni* ... ,, 569
minor, *Allioni* ... ,, 569
muricata, Del. ... ,, 569
rigida, *Griff.* ... ,, 570
seminuda, Griff. ... ,, 569
serristipula (*semistipula*) Balb. ... ,, 569
spinosa, Ham. ... ,, 569
tenuis, A. Br. ... ,, 570
ternata, Roxb. ... ,, 569
Nama zeylanica, Linn. ... iv. 134
sp., Linn. ... ,, 134
Nannorhops, *H. Wdl.* ... vi. 429
Ritchieana, *H. Wdl.* ... ,, 429
Nanothamnus, *Thoms.* ... iii. 273
sericeus, *Thoms.* ... ,, 273
Naravelia, *DC.* ... i. 6
Finlaysoniana, Wall. ... ,, 7
laurifolia, *Wall.* ... ,, 7
zeylanica, *DC.* ... ,, 7
Nardostachys, *DC.* ... iii. 210
grandiflora, DC. ... ,, 211
Jatamansi, *DC.* ... ,, 211
Nardurus, Rchb. ... vii. 356
tenuiflorus, Boiss. ... ,, 356
unilateralis, Fries ... ,, 356
Nardus indica, Blane ... vii. 203
indica, Linn. f. ... ,, 283
stricta, Linn. ... ,, 366
Thomæa, Linn. f. ... ,, 366
Naregamia, *W. & A.* ... i. 542
alata, *W. & A.* ... ,, 542
dentata, Miq. ... ,, 542
Nargedia, *Bedd.* ... iii. 122
macrocarpa, *Bedd.* ... ,, 122
NARTHECIEÆ ... vi. 301
Narthex, Falc. ... ii. 707
Asafœtida, Falc. ... ,, 707
Nasturtium, *Br.* ... i. 133
heterophyllum, Bl. ... ,, 134
heterophyllum, D. Don ... ,, 133
indicum, *DC.* ... ,, 134
madagascariense, W. & A. ,, 134
montanum, *Wall.* ... ,, 134
officinale, *Br.* ... ,, 133
palustre, *DC.* ... ,, 133
terrestre, Br. ... ,, 133
Nastus baccifera, Roxb. ... vii. 417
Thouarsii, Spreng. ... ,, 392
Tjangkorreh, Schult. ... ,, 415
Natsiatum, *Ham.* ... i. 595
gamosepalum, Griff. ... ,, 595
herpeticum, *Ham.* ... ,, 595

Natsiatum Vol. Page
 herpeticum, Ham. ... vii. 595
 oppositifolium, Pl. ... „ 596
 sp., Griff. ... „ 595
Nauclea, *Linn.* ... iii. 26
 acida, Hunter ... „ 33
 aralioides, Miq. ... „ 25
 Brunonis, Wall. ... „ 26
 Cadamba, Roxb. ... „ 23
 coadunata, Roxb. ... „ 22
 cordata, Roxb. ... „ 22
 cordifolia, Willd. ... „ 24
 diversifolia, Wall. ... „ 26
 elliptica, Dalz. & Gibs. ... „ 27
 excelsa, Bl. ... „ 27
 ferrea, Bl. ... „ 33
 ferruginea, Bl. ... „ 28
 ? *Gambier*, Hunter ... „ 31
 lanceolata, Bl. ... „ 26
 lanosa, Poir. ... „ 33
 Maingayi, *Hk. f.* ... „ 27
 microcephala, Wall. ... „ 25
 missionis, *Wall.* ... „ 27
 oblonga, Miq. ... „ 27
 occidentalis, Linn. ... „ 24
 orientalis, Hb. Madr. ... „ 27
 orientalis, Lamk. ... „ 28
 ovalifolia, Roxb. ... „ 27
 parviflora, Pers. ... „ 25
 parvifolia, Wall ... „ 22
 parvifolia, Willd. ... „ 25
 peduncularis, *Wall.* ... „ 27
 peduncularis, Thw. ... „ 26
 polycephala, Wall. ... „ 25
 purpurea, *Roxb.* ... „ 26
 purpurea, Wall. ... „ 22
 rotundifolia, Roxb. ... „ 26
 Roxburghii, G. Don ... „ 22
 scandens, Roxb. ... „ 30
 scandens, Sm. ... „ 32
 sclerophylla, Hunter ... „ 28
 sericea, Wall. ... „ 24
 sessilifolia, Roxb. ... „ 24
 setigera, Bl. ... „ 33
 stipulacea, Roxb. ... „ 22
 tetrandra, Roxb. ... „ 24
 trichotoma, Zoll. & Mor. ... „ 25
 tubulosa, Arn. ... „ 25
 undulata, Roxb. ... „ 22
 undulata, Wall. ... „ 22
 Wallichiana, Br. ... „ 22
 zeylanica, *Hk. f.* ... „ 26
NAUCLEEÆ ... iii. 17, 22
Nechamandra alternifolia, Thw. v. 659
 Roxburghii, Planch. ... „ 659
Nectandra decandra, Roxb. v. 198
Nectarobothrium striatum, Ledeb. ... vi. 354
Neerija dichotoma, Roxb. ... i. 623
Neesia, *Bl.* ... i. 352
 altissima, Bl. ... „ 352
 synandra, *Mast.* ... „ 352
Neillia, *D. Don* ... ii. Addend.
 rubiflora, *D. Don* ... „ „
 thyrsiflora, *D. Don* ... „ „
 virgata, Wall. ... „ „
Nelitris Jambosella, Gaertn. iii. 127
 pallescens, Miq. ... ii. 470
 paniculata, Lindl. ... „ 470
 polygama, Spreng. ... „ 470
 polymorpha, Bl. ... „ 470
Nelsonia, *R. Br.* ... iv. 394
 campestris, *Br.* ... „ 394
 canescens, Nees ... „ 394
 lamiifolia, Spreng. ... „ 394
 origanoides, R. & S. ... „ 394
 senegalensis, Oerst. ... „ 395
 Smithii, Oerst. ... „ 395
 tomentosa, Nees ... „ 394
 vestita, R. & S. ... „ 395
 villosa, Oerst. ... „ 395
NELSONIEÆ ... iv. 388
NELUMBIEÆ ... i. 113
Nelumbium, *Juss.* ... i. 115
 asiaticum, Rich. ... „ 116
 speciosum, *Willd.* ... „ 116
Nelumbo indica, Poir. ... i. 116
Nematopyxis fruticulosa, Miq. ii. 588
 prostrata, Miq. ... „ 588
 pusilla, Miq. ... „ 588
Nemedra Nimmonii, Dalz. ... i. 561
Nemodon sp., Griff. ... iv. 216
Nenga, *H. Wendl. & Drude* vi. 412
 gracilis, Becc. ... „ 407
 macrocarpa, *Scort.* ... „ 412
 pumila, Wendl. ... „ 412
 Wendlandiana, *Scheff.* ... „ 412
Nengella paradoxa, Becc. ... vi. 411
Neottia, *Linn.* ... vi. 103, 180
 amœna, Bieb. ... vi. 102
 australis, Br. ... „ 102
 crispata, Bl. ... „ 102
 flexuosa, Sm. ... „ 102
 Lindleyana, Dcne. ... „ 103
 listeroides, *Lindl.* ... „ 103
 macrophylla, D. Don ... „ 130
 monophylla, D. Don ... „ 131
 parviflora, Sm. ... „ 102
 plantaginea, D. Don ... „ 181
 procera, Ker. ... „ 111
 sinensis, Pers. ... „ 102
 strateumatica, Br. ... „ 103
 viridiflora, Bl. ... „ 96
NEOTTIEÆ ... v. 668, 673, vi. 88
NEPENTHACEÆ ... v. 68

Vol. Page
Nepenthes, *Linn.* ... v. 68
albo-marginata, *Lobb* ... ,, 70
ampullacea, Bl. ... ,, 69
ampullaria, *Jack* ... ,, 69
distillatoria, *Linn.* ... ,, 68
distillatoria, Wall. ... ,, 70
fimbriata, Bl. ... ,, 69
gracilis, *Korth.* ... ,, 71
Hookeri, Alph. ... ,, 69
indica, Poir. ... ,, 68
khasiana, *Hk. f.* ... ,, 70
Korthalsiana, Miq. ... ,, 71
lævis, Korth. ... ,, 71
macrostachya, Bl. ... ,, 69
phyllamphora, *Willd.* ... ,, 69
phyllamphora, Hk. f. & T. ,, 70
Rafflesiana, *Jack* ... ,, 69
Reinwardtiana, *Miq.* ... ,, 70
sanguinea, *Lindl.* ... ,, 70
sanguinea, Griff. ... ,, 70
tomentella, Miq. ... ,, 70
Nepeta, *Linn.* ... iv. 656
amboinica, Linn. ... ,, 672
annua, Pall. ... ,, 657
bipinnata, Cav. ... ,, 657
bombaiensis, *Dalz.* ... ,, 661
botryoides, *Ait.* ... ,, 657
calaminithodes, Benth. iv. 661, 662
campestris, *Benth.* ... iv. 658
campestris, Hk. f. & T. ... ,, 658
Cataria, *Linn.* ... ,, 662
ciliaris, *Benth.* ... ,, 661
Clarkei, *Hk. f.* ... ,, 663
clinopodioides, Royle ... ,, 661
connata, *Royle* ... ,, 657
discolor, *Benth.* ... ,, 659
distans, *Benth.* ... ,, 660
disticha, Bl. ... ,, 672
elliptica, *Royle* ... ,, 658
erecta, *Benth.* ... ,, 663
eriostachya, *Benth.* ... ,, 657
erodiifolia, Boiss. ... ,, 667
floccosa, *Benth.* ... ,, 662
glutinosa, *Benth.* ... ,, 660
Govaniana, *Benth.* ... ,, 663
graciliflora, *Benth.* ... ,, 663
indica, Burm. ... ,, 683
indica, Linn. ... ,, 672
lamiopsis, *Benth.* ... ,, 659
leucolæna, *Benth.* ... ,, 662
leucophylla, *Benth.* ... ,, 662
linearis, *Royle* ... ,, 657
longibracteata, *Benth.* ... ,, 660
macrantha, Led. ... ,, 663
madagascariensis, Lamk.? ,, 624
malabarica, Linn. ... ,, 673
mollis, *Benth.* ... ,, 660

Nepeta Vol. Page
multifida, Linn. ... iv. 657
nepalensis, Spreng. ... ,, 664
nervosa, *Royle* ... ,, 658
nivalis, *Benth.* ... ,, 664
polystachya, Benth. ... ,, 658
raphanorhiza, *Benth.* ... ,, 659
rotundifolia, Benth. ... ,, 662
ruderalis, *Ham.* ... ,, 661
ruderalis, Boiss. ... ,, 662
Sabinei, T. A. Schm. ... ,, 659
salviæfolia, *Royle* ... ,, 664
secunda, Wall. ... ,, 661
spicata, *Benth.* ... ,, 659
supina, *Stev.* ... ,, 658
Thomsoni, *Benth.* ... ,, 658
tibetica, *Benth.* ... ,, 664
versicolor, Trevir. ... ,, 672
sp., Hk. f. & T. ... ,, 660
NEPETEÆ ... iv. 606
Nephelaphyllum, *Bl.* ... v. 818, vi. 192
cordifolium, *Lindl.* ... v. 818
grandiflorum, *Hk. f.* ... vi. 192
nudum, *Hk. f.* ... ,, 192
pulchrum, *Bl* ... v. 818
tenuiflorum, *Bl.* ... v. 819, vi. 192
Nephelium, *Linn.* ... i. 686
bengalense, G. Don ... ,, 689
bifoliolatum, Thw. ... i. 684, 690
costatum, *Hiern.* ... i. 688
dimocarpus, Hk. f. & T. ... ,, 688
duriocarpus, T. And. ... ,, 688
echinatum, Noronh. ... ,, 687
erectum, Thw. ... i. 683, 690
eriopetalum, *Miq.* ... i. 689
eximium, Thw. ... i. 690, 691
fuscatum, Thw. ... ,, 682, 690
Gardneri, *Thw.* ... i. 690
glabrum, *Noronh.* ... ,, 687
Griffithianum, Kurz ... ,, 687
hypoleucum, Kurz ... ,, 689
lappaceum, *Linn.* ... ,, 687
Lit-chi, *Camb.* ... i. 685, 687
Longana, *Camb.* i. 679, 685, 688
? Maingayi, *Hiern.* ... i. 688
malaiense, *Griff.* ... ,, 689
mora, Gardn. ... ,, 689
mutabile, *Bl.* ... ,, 686
Noronhianum, Camb. i. 686, 690
pupillum, Wight ... i. 689
rimosum, G. Don ... ,, 690
rubescens, *Hiern* ... ,, 688
rubrum, G. Don ... i. 684, 691
simplicifolium, Thw. ,, 683, 691
stipulaceum, *Bedd.* ... i. 690
variabile, Wall. ... ,, 691
verticillatum, G. Don i. 684, 691
xerocarpum, Camb. ... ,, 686, 691

Vol. Page
Nephelochloa altaica, Griseb. vii. 338
persica, Griseb.... ... ... „ 337
soongarica, Griseb. ... ... „ 338
tripolitana, Boiss. & Blanch. „ 338
Nephrocœlium malaccense, Turcz v. 665
Nephroica mollis, Miers ... i. 102
Neptunia, *Lour.* ... ... ii. 285
oleracea, *Lour.*... ... ... „ 285
plena, *Benth.* ... ... „ 286
triquetra, *Benth.* ... ... „ 286
Nerium, *Linn.* ... . iii. 654
antidysentericum, Linn. ... „ 654
caudatum, Lamk. ... ... „ 655
caudatum, Roxb. ... ... „ 656
coccineum, Roxb. ... ... „ 654
Coraia, Ham. ... ... „ 653
coronarium, Jacq. ... ... „ 647
divaricatum, Hb. Madr. ... „ 654
divaricatum, Linn. ... ... „ 647
grandiflorum, Roxb.... ... iv. 6
indicum, Mill. ... ... iii. 655
latifolium, Mill... ... ... „ 655
odoratum, Lamk. ... ... „ 655
odorum, *Soland.* . ... „ 655
pauciflorum, Roxb. ... ... iv. 6
Piscidium, Hort. Calc. ... „ 46
Piscidium, Roxb. ... ... iii. 629
reticulatum, Roxb. ... ... iv. 5
scandens, Lour.... ... ... iii. 655
? *tinctorium*, Ham. ... ... „ 653
tinctorium, Roxb. ... ... „ 653
tomentosum, Roxb. ... ... „ 653
zeylanicum, Linn. ... ... „ 654
Nervilia Aragoana, Gaud. ... vi. 121
Nesœa triflora, Kunth ... ... ii. 565
Neslia, *Desv.* ... ... i. 164
paniculata, *Desv.* ... ... „ 164
Neubeckia decora, Klatt ... vi. 274
sulcata, Klatt ... ... „ 274
Neuracanthus, *Nees* ... ... iv. 490
grandiflorus, *Kurz* ... ... „ 491
Lawii, Wight ... ... „ 491
Neesianus, *Clarke* ... ... „ 491
sphærostachyus, *Dalz.* ... „ 491
subuninervius, Kurz... ... „ 519
tetragonostachyus, *Nees*... „ 491
tetragonostachyus, Wall. ... „ 528
trinervius, *Wight* ... ... „ 491
sp., Kew Distrib. ... ... „ 491
Neurachne Meneritana, R. & S. vii. 25
Neurada, *Linn.* ... ... ii. 368
procumbens, *Linn.* ... ... „ 368
Neuradeæ ... ... ii. 308
Neurocalyx, *Hook.* ... ... iii. 46
capitata, *Benth.* ... ... „ 47
Championii, *Benth.* ... ... „ 47
Gardneri, *Thw.*... ... ... „ 47
Neurocalyx Vol. Page
Hookeriana, Wight ... ... iii. 47
Wightii, *Arn.* ... ... „ 47
zeylanica, *Hook.* ... ... „ 47
Neurocarpum cajanæfolium, Presl ... ... ii. 209
retusum, Hassk. ... ... „ 209
Neuroloma (Neurotoma) *nudicaule*, DC. ... ... i. 131
scapigerum, DC. ... ... „ 131
Neuropeltis, *Wall.* ... ... iv. 224
bracteata, Griff.... ... ... „ 225
intermedia, Griff. ... ... „ 225
ovata, Wall. ... ... „ 225
racemosa, *Wall.* ... ... „ 225
Neustanthus javanicus, Benth. ii. 199
peduncularis, Benth. ... „ 197
phaseoloides, Benth.... ... „ 199
sericans, Miq. ... ... „ 199
subspicatus, Benth. ... ... „ 199
Neuwiedia, *Bl.* ... ... vi. 175
Curtisii, *Rolfe* ... ... „ 175
Griffithii, *Rchb. f.* ... ... „ 176
Lindleyi, *Rolfe* ... ... „ 175
Neyraudia, *Hk. f.* ... vii. 305, 421
madagascariensis, *Hk. f.* vii. 305
Nicandra, *Adans*.... ... ... iv. 240
anomala, Link & Otto ... „ 243
indica, R. & S. ... ... „ 238
physaloides, *Gaertn.* ... „ 240
Nicolsonia, DC. ... ... ii. 170
congesta, Wight ... ... „ 152
reptans, Meissn. ... ... „ 173
Nicotiana, *Linn.* ... ... iv. 245
crispa, Pers. ... ... „ 246
plumbaginifolia, *Viv.* ... „ 246
rustica, Linn. ... ... „ 245
Tabacum, *Linn.* ... ... „ 245
Nictanthes, vide *Nyctanthes*
Niebuhria, *DC.* ... ... i. 171
arenaria, DC. ... ... „ 171
linearis, *DC.* ... ... „ 171
oblongifolia, DC. ... ... „ 171
oblongifolia, Royle .... „ 171
Nima quassiodes, Ham. mss. i. 520
Nimmonia floribunda, Wight. ii. 567
Lawii, Wight ... ... i. 561
Niota Lamarkiana, Bl. ... i. 519
lucida, Wall. ... ... „ 519
pentapetala, Poir. ... ... „ 519
? *polyandra*, Ham. ... ... „ 517
tetrapetala, Lamk. ... ... „ 519
Nipa, *Wurmb.* ... ... vi. 424
fruticans, *Wurmb.* ... ... „ 424
Nirbisia, G. Don ... ... i. 27
Noccæa mollis, Jacq. ... ... iii. 302
Nolina ? javanica, Hassk. ... vi. 336
Nomaphila, *Bl.* ... ... iv. 409

Nomaphila Vol. Page
corymbosa, Bl. ... iv. 409
Parishii, *T. Anders.* ... „ 409
pinnatifida, Dalz. ... „ 405
pubescens, Kurz ... „ 409
stricta, *Nees* ... „ 409
Nomismia aurea, W. & A. ... ii. 221
capitata, W. & A. ... „ 221
nummularia, W. & A. ... „ 221
Nonatelia ? hispida, Wall. ... iii. 180
Nonnea, *Moench.* ... iv. 169
Edgeworthii, A. DC. ... „ 169
pulla, *Lamk.* ... „ 169
taurica, Ledeb. ... „ 169
Norisca mysorensis, Wight i. 253
Norrisia, *Gardn.* ... iv. 85
malaccensis, *Gardn.* ... „ 85
Nortenia Thouarsii (Thomassii) Cham. & Schl. ... iv. 278
Notelæa Posua, D. Don. ... iii. 611
Zollingeriana, Teijs. & Binn „ 612
Nothaphœbe ? petiolaris, Meissn. ... v. 145
umbelliflora, Bl. ... „ 145
Nothocnestis sumatrana, Miq. i. 622
Notholirion macrophyllum, Boiss. ... vi. 352
roseum, Wall. ... „ 352
Nothopanax fruticosum, Miq. ii. 725
? pinnatum, Miq. ... „ 734
tricochleatum, Miq. ... „ 727
Nothopegia, *Bl.* ... ii. 39
aureo-fulva, *Bedd.* ... „ 40
Colebrookiana, *Bl.* ... „ 40
travancorica, *Bedd.* ... „ 40
Nothosærua, Wight ... iv. 726
brachiata, *Wight* ... „ 726
Nothoscordium Sulvia, Kunth vi. 337
Notoceras, *Br.* ... i. 140
canariense, *Br.* ... „ 140
hispanicum, DC. ... „ 140
Notochæte, *Benth.* ... iv. 694
hamosa, *Benth.* ... „ 694
Notonia, *DC.* ... iii. 337
balsamica, *Dalz. & Gibs.* „ 337
corymbosa, DC. ... „ 337
crassissima, DC. ... „ 338
crassissima, Schultz ... „ 337
grandiflora, *DC.* ... „ 337
Walkeri, *Clarke* ... „ 337
Notonia, W. & A. ... ii.
Wightii, W & A. ... „ 183
Notothixos, *Oliv* ... v. 227
floccosus, *Oliv.* ... „ 227
NYCTAGINEÆ ... iv. 708
Nyctanthes, *Linn.* ... iii. 603
angustifolia, Linn. ... „ 598
Arbor-tristis, *Linn.* ... „ 603
Nyctanthes Vol. Page
hirsuta, Linn. ... iii. 126, 592
multiflora, Burm. ... iii. 592
pubescens, Retz. ... „ 592
Sambac, Linn. ... „ 591
scandens, Retz. ... „ 595
triflora, Burm. ... „ 598
undulata, Linn. ... „ 591
viminea, Retz. ... „ 598
Nyctocalos, *Teysm. & Binn.* iv. 376
Thomsoni, *Hk. f.* ... „ 377
Nymphæa, *Linn.* ... i. 114
alba, *Linn.* ... „ 114
cachemiriana, Camb. ... „ 114
cyanea, Roxb. ... „ 114
Devoniensis, Hook. ... „ 114
Edgeworthii, Lehm. ... „ 114
edulis, DC. ... „ 114
Hookeriana, Lehm. ... „ 114
Lotus, *Linn.* ... „ 114
Nelumbo, Linn. ... „ 116
punctata, Edgw. ... „ 114
pubescens, Willd. ... „ 114
pygmæa, *Ait.* ... „ 115
rubra, Roxb. ... „ 114
sagittata, Edgew. ... „ 114
stellata, *Willd.* ... „ 114
versicolor, Roxb. ... „ 114
NYMPHÆACEÆ ... i. 113
Nymphanthus Niruri, Lour. v. 298
NYMPHEÆ ... i. 113
Nyssa, *Linn.* ... ii. 747
sessiliflora, *Hk. f.* ... „ 747

Oberonia, *Lindl.* ... v. 675
acaulis, Griff. ... „ 679
acaulis, Hook. ... „ 679
anceps, *Lindl.* ... „ 685
angustifolia, *Lindl.* v. 684, vi. 181
anthropophora, *Lindl.* ... v. 684
Arnottiana, Wight ... „ 683
bicornis, *Lindl.* ... „ 682
brachystachys, *Lindl.* ... „ 677
Browneana, Thw. ... „ 680
Brunoniana, *Wight* ... „ 681
caulescens, *Lindl.* v. 682, vi. 181
ciliolata, *Hk. f.* ... vi. 181
cimicina, Griff. ... v. 676
Clarkei, *Hk. f.* ... „ 676
demissa, *Lindl.* ... „ 680
denticulata, Wight ... „ 676
ensiformis, *Lindl.* ... „ 679
Falconeri, *Hk. f.* v. 678, vi. 180
ferruginea, *Par.* ... v. 679
flexuosa, Par. ... „ 676
forcipata, *Lindl.* ... „ 681
Gardneriana, *Thw.* ... „ 686
gracilis, *Hk. f.* ... „ 685

Oberonia Vol. Page
Griffithiana, *Lindl.* v. 676, vi. 180
Griffithii, Wight ... ... v. 685
Helferi, *Hk. f.* ... ... „ 679
imbricata, Wight ... ... „ 685
insectifera, *Hk. f.* ... ... vi. 180
iridifolia, *Lindl.* v. 675, vi. 180
iridifolia, Wall. ... ... v. 678, 681
Jenkinsiana, *Griff.* ... ... v. 676
Lindleyana, *Wight* ... ... „ 681
longibracteata, *Lindl.* ... „ 678
longibracteata, Thw. ... „ 680
lunata, *Lindl.* ... ... vi. 180
Mannii, *Hk. f.* ... ... „ 180
maxima, *Par.* ... ... v. 677
miniata, *Lindl.* ... ... „ 685
Myosurus, *Lindl.* ... ... „ 685
myriantha, *Lindl.* ... ... „ 679
obcordata, *Lindl.* ... ... „ 684
orbicularis, *Hk. f.* ... ... „ 677
pachyrachis, *Rchb. f.* v. 681, vi. 181
platycaulon, *Wight* ... ... v. 682
platycaulon, Thw. ... ... „ 686
pyrulifera, *Lindl.* ... ... „ 678
recurva, *Lindl.* v. 680, vi. 180
rosea, *Hk. f.* ... ... vi. 180
rufilabris, *Lindl.* ... ... v. 683
Scortechini, *Hk. f.* ... ... „ 683
Scyllæ, *Lindl.* ... ... „ 684
setifera, Lindl. ... ... „ 680
sikkimensis, Lindl. ... ... „ 679
spiralis, Griff. ... ... „ 686
stachyoides, A. Rich. ... „ 683
tenuis, *Lindl.* ... ... „ 682
Thwaitesii, *Hk. f.* ... ... „ 678
Treutleri, *Hk. f.* ... ... „ 683
trilobata, Griff. ... ... „ 679
truncata, *Lindl.* ... ... „ 677
verticillata, *Wight* ... ... „ 677
Wallichii, *Hk. f.* ... ... „ 681
Wightiana, *Lindl.* ... ... „ 683
zeylanica, *Hk. f.* ... ... „ 680
Obione Belangeri, Moq. ... v. 7
Koenigii, Moq. ... ... „ 7
nummularia, Moq. ... ... „ 7
Stocksii, Wight ... ... „ 7
Ochanostachys, *Mast.* ... i. 576
amentacea, *Mast.* ... ... „ 577
Ochlandra, *Thw.* ... ... vii. 418
Beddomei, *Gamble* ... ... „ 419
Brandisii, *Gamble* ... ... „ 420
Rheedii, *Benth.* ... ... „ 418
Ridleyi, *Gamble* ... ... „ 420
setigera, *Gamble* ... ... „ 420
stridula, *Thw.* ... ... „ 419
travancorica, *Benth.* ... „ 419
Ochna, *Linn.* ... ... i. 523
andamanica, Kurz ... ... „ 524
Ochna Vol. Page
? brevipes, *Planch.* ... ... i. 525
collina, Edgew. ... ... „ 524
cordata, Thw. ... ... „ 524
crocea, Griff. ... ... „ 525
fruticulosa, Kurz ... ... „ 524
Heyneana, W. & A. ... ... „ 524
humilis, Wall. ... ... „ 524
lucida, Lamk. ... ... „ 523
Moonii, Thw. ... ... „ 524
nana, Ham. ... ... „ 524
nitida, Thunb. ... ... „ 523
nitida, Wall. ... ... „ 524
obtusata, DC. ... ... „ 523
parviflora, Griff. ... ... „ 524
parvifolia, Vahl ? ... ... „ 524
pumila, *Ham.* ... ... „ 524
rufescens, Thunb. ? ... ... „ 523
squarrosa, *Linn.* ... ... „ 523
squarrosa, Kurz ... ... „ 524
stipulacea, ? Colebr. ... ... „ 524
Walkerii, Planch. ... ... „ 524
Wallichi, *Planch.* ... ... „ 524
Wightiana, *Wall.* ... ... „ 524
zeylanica, Lamk. ... ... „ 525
OCHNACEÆ ... ... i. 523
OCHNEÆ ... ... i. 523
Ochradenus, *Del.* ... ... i. 182
baccatus, *Del.* ... ... „ 182
Ochrocarpus, *Thouars* ... ... i. 270
longifolius, *Benth. & Hk. f.* „ 270
siamensis, *T. Anders.* ... „ 270
Ochrosia, *Juss.* ... ... iii. 638
borbonica, *Gmel.* ... ... „ 638
salubris, Bl. ... ... „ 638
Ochthocharis, *Bl.* ... ... ii. 528
javanica, *Bl.* ... ... „ 528
paniculata, *Korth.* ... ... „ 528
Ochthocloa dactyloides, Edgew. vii. 294
OCIMOIDEÆ ... ... iv. 605
Ocimum, *Linn.* ... ... iv. 607
acrocephalum, Bl. ... ... „ 611
adscendens, *Willd.* ... ... „ 609
adscendens, Wight ... ... „ 614
album, Linn. ... ... „ 608
album, Roxb. ... ... „ 607
americanum, Jacq. ... ... „ 608
americanum, Linn. ... ... „ 607
asperum, Roth ... ... „ 625
Barrelieri, Roth ... ... „ 608
Basilicum, *Linn.* ... ... „ 608
bullatum, Lamk. ... ... „ 608
canum, *Sims* ... ... „ 607
capitatum, Roth ... ... „ 611
capitellatum, Linn. f. ... „ 611
caryophyllatum, Roxb. ... „ 608
Chandra, Ham. ... ... „ 611
ciliare, Heyne ... ... „ 608

Ocimum Vol. Page
ciliatum, Hornem. ... iv. 608
cinereum, Br. ... ,, 625
citronatum, Ham. ... ,, 608
Coetsa, Spreng. ... ,, 620
cordifolium, Herb. Madr. ,, 614
cristatum, Roxb. ... iv. 608, 609
densiflorum, *Roth* ... iv. 624
? *diffusum*, Benth. ... ,, 613
fastigiatum, Roth ... ,, 656
flaccidum, A. Rich. ... ,, 611
frutescens, Linn. ... ,, 646
glaucum, Heyne ... ,, 614
grandiflorum, Bl. ... ,, 615
gratissimum, *Linn.* ... ,, 608
hirsutum, Benth. ... ,, 609
hirsutum, Wall. ... ,, 613
hispidum, Lamk. ... ,, 608
indicum, Roth ... ,, 609
inodorum, Burm. ... ,, 609
integerrimum, Willd. ... ,, 608
lacerum, Heyne ... ,, 608
longiflorum, Ham. ... ,, 615
macrostachyum, Poir. ... ,, 610
mayporense, Roth ... ,, 621
medium, Mill. ... ,, 608
menthæfolium, Benth. ... ,, 608
menthæfolium, Hochst. ... ,, 609
menthoides, Burm. ... , 610
minimum, *Linn.* ... ,, 609
minimum, Burm. ... ,, 608
Miria, Ham. ... ,, 615
molle, Ait. ... ,, 621
mollissimum, Wall. ... ,, 615
monachorum, Linn. ... ,, 609
monadelphum, Roth ... ,, 625
petiolare, Miquel ... ,, 614
pilosum, Willd. ... ,, 608
polystachyum, Linn. ... ,, 612
prostratum, Linn. ... ,, 610
rigidum, Ham. ... ,, 615
robustum, Heyne ... ,, 608
rubicundum, Ham. ... ,, 615
saccharoides, Willd. ... ,, 625
sanctum, *Linn.* ... ,, 609
scabrum, Wight ... ,, 608
scutellarioides, Linn. ... ,, 626
suave, Willd. ... ,, 609
subserratum, Heyne ... ,, 609
tenuiflorum, Burm. ... ,, 612
tenuiflorum, Heyne ... ,, 610
tenuiflorum, Linn. ... ,, 609
ternifolium, Spreng. ... ,, 621
? *thymiflorum*, Roth ... ,, 614
thyrsiflorum, Linn. ... ,, 608
triste, Roth, lapsu *Orthosiphon* ... ,, 613
tuberosum, Roxb. ... ,, 615

Ocimum Vol. Page
urticæfolium, Roth ... iv. 609
verticillatum, Heyne ... ,, 609
villosum, Roxb. ... ,, 609
virgatum, Ham. ... ,, 615
? *Zatarhendi*, Forsk. ... ,, 625
Ocotea attenuata, Nees ... v. 143
declinata, Bl. ... ,, 142
glaucescens, Nees ... ,, 140
lanceolata, Nees ... ,, 141
ligustrina, Nees ... ,, 142
ligustrina, Str. & W. ... ,, 140
pallida, Nees ... ,, 142
paniculata, Nees ... ,, 142
pubescens, Nees ... ,, 142
sericea, Nees ... ,, 139
umbellifera, Nees ... ,, 145
Octarrhena parvula, Thw. ... v. 811
Octomeria alba, Wall. ... v. 795
convallarioides, Wall. ... ,, 791
excavata, Wall. ... ,, 795
flava, Wall. ... ,, 801
pubescens, Spreng. ... ,, 801
secunda, Wall. ... ,, 791
spicata, D. Don ... ,, 791
Octotropis, *Bedd.* ... iii. 131
travancorica, *Bedd.* ... ,, 131
Odina, *Roxb.* ... ii. 29
Wodier, *Roxb.* ... ,, 29
Odonia trinervia, Spreng. ... ii. 212
Odontanthera, Wight ... iv. 4
Odontites rubra, Benth. ... iv. 305
serotina, Boiss. ... ,, 305
Odontochilus, *Bl.* ... vi. 98, 179
brevistylis, *Hk. f.* ... vi. 100
calcaratus, *Hk. f.* ... ,, 99
Clarkei, *Hk. f.* ... ,, 100
crispus, *Hk. f.* ... ,, 99
Elwesii, *Clarke* ... ,, 100
flavus, Benth. ... ,, 101
grandiflorus, *Benth.* ... ,, 100
lanceolatus, *Benth.* ... ,, 101
macranthus, *Hk. f.* ... ,, 98
pectinatus, *Hk. f.* ... ,, 99
pumilus, *Hk. f.* ... ,, 99
Odontostemma (lapsu *Adenostemma*) *glandulosum*, Benth. ... i. 242
Œceoclades flexuosa, Lindl. vi. 72
paniculata, Lindl. ... ,, 58
pusilla, Lindl. ... ,, 57
Retzii, Lindl. ... ,, 37
tenera, Lindl. ... ,, 73
Œdipachne punctata, Link vii. 21
Œnanthe, *Linn.* ... ii. 695
benghalensis, *Benth.* ... ,, 696
corticata, Edgew. ... ,, 696
fistulosa, Linn. ... ,, 697

Œnanthe Vol. Page
Hookeri, *Clarke* ... ... ii. 697
javanica, DC. ... ... ,, 696
laciniata, Miq. ... ... ,, 696
linearis, *Wall.* ... ... ,, 696
stolonifera, *Wall.* ... ... ,, 696
Thomsoni, *Clarke* ... ... ,, 697
Œnothera odorata, Jacq. ... ii. 582
rosea, Sol. ... ... ,, 582
tetraptera, Cav. ... ... ,, 582
Œonia ? alata, A. Rich. ... vi. 73
Oianthus, *Benth.* ... ... iv. 48
Beddomei, *Hk. f.* ... ... ,, 49
disciflorus, *Hk. f.* ... ... ,, 49
urceolatus, *Benth.* ... ... ,, 49
Oiospermum ? Metzianum, Schultz, lapsu *Diospermum* ... ... iii. 228
Wightianum, DC. ... ... ,, 301
OLACEÆ ... ... i. 573
OLACINÆ ... ... i. 572
Olax, *Linn.* ... ... i. 574
acuminata, *Wall.* ... ... ,, 576
Bador, Ham. ... ... ,, 575
Heyneana, Wall. ... i. 576, 586
imbricata, *Roxb.* ... ... i. 575
longifolia, Wall. ... i. 576, 586
lucida, Heyne ... ... i. 575
merguensis, *Planch.* ... ,, 576
nana, *Wall.* ... ...i. 576, iii. 620
psittacorum, Vahl ... ... i. 575
scandens, *Roxb.* ... ... ,, 575
? *sumatrana*, Miq. ... ... ,, 582
Wightiana, *Wall.* i. 575, v. 223
zeylanica, *Linn.* ... ... i. 576
zeylanica, Wall. ... ... ,, 575
Oldenlandia, *Linn.* ... ... iii. 64
affinis, DC. ... ... ,, 67
alata, *Hk. f.* ... ... ,, 70
alata, Roxb. ... ... ,, 69
alsinifolia, G. Don ... ... ,, 64
angustifolia, Benth. ... ,, 60
arguta, *Hk. f.* ... ... ,, 67
aspera, *DC.* ... ... ,, 68
asperula, DC. ... ... ,, 65
biflora, *Hk. f.* ... ... ,, 70
biflora, Lamk. ... ... ,, 64
brachiata, *Hk. f.* ... ... ,, 66
brachypoda, DC. ... ... ,, 65
capillaris, DC. ... ... ,, 71
coccinea, *Hk. f.* ... ... ,, 69
corymbosa, *Linn.* ... ... ,, 64
crystallina, *Roxb.* ... ... ,, 65
? *depressa*, Willd. ... ... ,, 71
dichotoma, *Hk. f.* ... ... ,, 67
diffusa, *Roxb.* ... ... ,, 65
digyna, Retz. ... ... ii 309
gracilis, *Hk. f.* ... ... iii. 68

Oldenlandia Vol. Page
graminifolia, DC. ... ... iii. 69
herbacea, DC. ... ... ,, 64
herbacea, Willd. ... ... ,, 65
Heynei, *Hk. f.* ... ... ,, 65
hirsuta, Linn. f. ... ... ,, 63
hispida, Benth. ... ... ,, 61
? *hispida*, DC. ... ... ,, 71
japonica, Miq. ... ... ,, 63
lactea, Cham. & Sch. ... ,, 71
linarifolia, Hb. Madr. ... ,, 67
? *linearis*, DC. ... ... ,, 65
linifolia, DC. ... ... iii. 65, 69
maritima, Roth ... ... iv. 287
multiflora, Cav. ... ... iii. 69
mysurensis, G. Don ... ... ,, 75
nudicaulis, *Roth* ... ... ,, 70
ovatifolia, DC. ... ... ,, 70
oxyphylla, G. Don ... ... ,, 72
paniculata, *Linn.* ... ... ,, 69
paniculata, Roxb. ... ... ,, 70
Parishii, *Hk. f.* ... ... ,, 70
pterita, Miq. ... ... ,, 70
puberula, G. Don ... ... ,, 66
pumila, DC. ... ... ,, 65
pusilla, Roth ... ... ,, 67
racemosa, Bl. ... ... ,, 69
ramosa, Roxb. ... ... ,, 64
ramosissima, Bl. ... ... ,, 69
repens, Burm. ... ... ,, 66
repens, Linn. ... ... ,, 42
retrorsa, *Boiss.* ... ... ,, 68
rotundifolia, G. Don ... ,, 70
rubioides, Miq. ... ... ,, 57
scabrida, DC. ... ... ,, 64
? **senegalensis**, *Hiern* ... ,, 68
Shuteri, *Hk. f.* ... ... ,, 69
spergulacea, DC. ... ... ,, 70
Stocksii, *Hk. f.* ... ... ,, 67
stricta, *Linn.* ... ... ,, 68
Teysmaniana, Miq. ... ... ,, 75
trinervia, *Retz* ... ... ,, 66
umbellata, *Linn.* ... ... ,, 66
Wightii, *Hk. f.* ... ... ,, 66
Olea, *Linn.* ... ... iii. 611
apetala, Vahl ... ... ,, 613
attenuata, Wall. ... ... ,, 611
clavata, G. Don ... ... ,, 615
compacta, Wall. ... ... ,, 616
cuspidata, *Wall.* ... ... ,, 611
dentata, *Wall.* ... ... ,, 613
dioica, *Roxb.* ... ... ,, 612
ferruginea, Royle ... ... ,, 611
fragrans, Thunb. ... ... ,, 606
Gamblei, *Clarke* ... ... ,, 613
Gardneri, Thw. ... ... ,, 613
glandulifera, *Wall.* ... ... ,, 612
grandiflora, Wall. ... ... ,, 617

Olea Vol. Page
Heyneana, Wall. ... ... iii. 612
Lindleyi, Wall. ... ... „ 616
linocieroides, Wight ... ... „ 608
maritima, *Wall.* ... ... „ 612
microcarpa, Vahl ... ... „ 613
paniculata, Roxb. ... ... „ 609
pauciflora, Wall. ... ... „ 609
polygama, *Wight* ... ... „ 613
robusta, Wall. ... ... „ 614
Roxburghiana, R. & S. ... „ 609
Roxburghii, Spreng. iii. 609, 615
Roxburghii, Wall. ... ... iii. 615
salicifolia, Wall. ... ... „ 613
terniflora, Kurz ... ... „ 610
Wightiana, Wall. ... ... „ 612
sp., Griff. ... ... „ 614
OLEACEÆ ... ... iii. 590
OLEINEÆ ... ... iii. 591
Oleoxylon balsamiferum, Wall. i. 298
Oligolepis amaranthoides, Wight ... ... iii. 274
Oligomeris, *Camb.* ... ... i. 181
glaucescens, *Camb.* ... ... „ 181
Oligopholis tubulosa, Wight iv. 321
Olus calappoides, Rumph. ... v. 657
Olyra malaccensis, Kœn. ... vi. 688
orientalis, Lour. ... ... „ 685
Omalanthus Leschenaultianus, A. Juss. ... ... v. 469
Omphalobium indicum, Gærtn. ... ... ii. 51
pinnatum, DC. ... ... „ 50
Omphalodes, *Moench* ... ... iv. 155
longiflora, A. DC. ... ... „ 159
nervosa, Edgew. ... ... „ 158
Thomsoni, *Clarke* ... ... „ 155
sp., Hk. f. & T. ... iv. 155, 162
ONAGRACEÆ ... ... ii. 582
Oncosperma, *Bl.* ... ... vi. 414
cambodiana, Hance ... ... „ 414
fasciculata, *Thw.* ... ... „ 415
filamentosa, *Bl.* ... ... „ 414
horrida, *Scheff.* ... ... „ 415
Onobrychis, *Gærtn.* ... ... ii. 141
cuneifolia, DC. ... ... „ 92
diffusa, Camb. ... ... „ 140
heterophylla, C. A. M. ... „ 142
rotundifolia, Desv. ... ... „ 92
Stewartii, *Baker* ... ... „ 141
Ononis, *Linn.* ... ... ii. 85
altissima, Lam. ... ... „ 85
arvensis, Linn. ... ... „ 85
Aucheri, J. & S. ... ... „ 91
glutinosa, Mart. ... ... „ 81
hircina, *Jacq.* ... ... „ 85
procurrens, Benth. ... ... „ 85
Onopordon lanatum, Hb. Madr. iii. 387

Vol. Page
Onosma, *Linn.* ... ... iv. 177
arenarium, Waldst. & Kit. „ 178
bicolor, *Wall.* ... ... „ 179
bracteatum, *Wall.* ... ... „ 178
echioides, *Linn.* ... ... „ 178
Emodi, *Wall.* ... ... „ 179
Emodi, Wall. Cat. ... ... „ 179
Gmelini, Ledeb. ... ... „ 178
hispida, Wall. ... ... „ 178
Hookeri, *Clarke* ... ... „ 178
macrocephalum, D. Don ... „ 178
Thomsoni, *Clarke* ... ... „ 178
vestitum, Wall. ... ... „ 179
Wallichianum, *Benth.* ... „ 179
sp., Hk. f. & T. ... ... „ 178
Onychium crumenatum, Bl. v. 729
lamellatum, Bl. ... ... „ 749
subulatum, Bl. ... ... vi. 184
Operculina Turpethum, Mans. iv. 112
Ophelia affinis, Arn. ... ... iv. 126
alata, Griseb. ... ... „ 125
alba, Arn. ... ... „ 127
angustifolia, D. Don ... „ 125
bimaculata, Sieb. & Zucc. „ 123
Chirata, Griseb. ... ... „ 124
ciliata, G. Don ... ... „ 121
cordata, D. Don ... ... „ 123
cordata, Griseb. ... ... „ 123
corymbosa, Griseb. ... ... „ 126
Dalhousieana, Griseb. ... „ 121
densifolia, Griseb. ... ... „ 127
elegans, Wight ... ... „ 126
florida, G. Don ... ... „ 125
Grisebachiana, Wight ... „ 126
Lawii, Arn. ... ... „ 126
lucida, G. Don ... ... „ 124
lurida, D. Don ... ... „ 124
macrosperma, Clarke ... „ 123
minor, Griseb. ... ... „ 120
multiflora, Dalz. ... ... „ 127
nuda, Klotz. ... ... „ 123
paniculata, D. Don ... ... „ 122
pauciflora, Dalz. ... ... „ 126
porrigens, G. Don ... ... „ 125
pratensis, Edgew. ... ... „ 125
pulchella, D. Don ... ... „ 125
purpurascens, D. Don ... „ 121
racemosa, Griseb. ... ... „ 124
tetragona, Edgew. ... ... „ 122
trichotoma, W. & A. ... ... „ 126
umbellata, Wight ... ... „ 126
Wallichii, G. Don ... ... „ 122
zeylanica, Griseb. ... ... „ 127
sp., Hk. f. & T. ... iv. 123, 124
OPHIOPOGONEÆ ... ... vi. 264
Ophiopogon, *Ker* ... ... vi. 267
brevifolius, Royle ... ... „ 324

Ophiopogon Vol. Page
Clarkei, *Hk. f.* ... ... vi. 268
dracænoides, *Hk. f.* ... „ 268
Griffithii, *Hk. f.* ... ... „ 270
indicus, Rottl. ... ... „ 269
indicus, Royle ... ... „ 270
indicus, Wight ... ... „ 269
intermedius, *D. Don* ... „ 269
japonicus, Ker ... ... „ 267
japonicus, Wall. ... vi. 268, 269
longifolius, Dcne. ... ... vi. 268
Malcolmsoni, *Royle* ... ... „ 269
micranthus, *Hk. f.* ... ... „ 269
minor, Royle ... ... „ 270
mollis, Royle ... ... vi. 270, 324
? *pallidus*, Wall. ... vi. 270, 324
proliferus, *Lindl.* ... ... vi. 270
reptans, *Hk. f.* ... ... „ 268
spicatus, Ker ... ... „ 270
Wallichianus, *Hk. f.* ... „ 268
Ophiorrhiza, *Linn.* ... ... iii. 77
angustifolia, Thw. ... ... „ 77
argentea, Wall. ... ... „ 78
bracteolata, Br. ... ... „ 83
Brunonis, *W. & A.* ... ... „ 79
calcarata, *Hk. f.* ... ... „ 84
discolor, *Br.* ... ... „ 79
discolor, Wall. ... ... „ 79
eriantha, *Wight* ... ... „ 81
erubescens, *Wall.* ... ... „ 84
fasciculata, *D. Don* ... ... „ 83
? *geminata*, Wall. ... ... „ 77
glechomæfolia, *Thw.* ... „ 84
gracilis, *Kurz* ... ... „ 80
grandiflora, *Wight* ... ... „ 80
Griffithii, *Hk. f.* ... ... „ 82
Harrisiana, *Heyne* ... ... „ 78
hirsutula, *Wight* ... ... „ 81
hispida, *Hk. f.* ... ... „ 83
hispidula, Wall. ... ... „ 78
imbricata, Gardn. ... ... „ 81
lurida, *Hk. f.* ... ... „ 82
Mungos, *Linn.* ... ... „ 77
Mungos, Wall. ... ... „ 81
nana, Edgew. ... ... „ 46
nemorosa, Thw. ... ... „ 77
nutans, *Clarke* ... ... „ 84
ochroleuca, *Hk. f.* ... ... „ 78
oppositiflora, *Hk. f.* ... „ 80
pallida, *Thw.* ... ... „ 81
pauciflora, *Hk. f.* ... ... „ 84
pectinata, *Arn.* ... ... „ 81
prostrata, D. Don ... ... „ 78
radicans, *Gardn.* ... ... „ 80
rosea, *Hk. f.* ... ... „ 78
Roxburghiana, *Wight* ... „ 81
rugosa, Hk. f. & T. ... ... „ 82
rugosa, Wall. ... ... „ 78
Ophiorrhiza Vol. Page
subcapitata, *Wall.* ... ... iii. 83
succirubra, *King* ... ... „ 82
Thomsoni, *Hk. f.* ... ... „ 82
tomentosa, *Jack* ... ... „ 79
Treutleri, *Hk. f.* ... ... „ 83
trichocarpa, *Bl.* ... ... „ 78
villosa, *Roxb.* ... ... „ 79
villosa, Kurz ... ... „ 78
villosa, Wall. ... ... „ 83
Wallichii, *Hk. f.* ... ... „ 79
sp., Griff. ... ... „ 82
sp., Hk. f. & T. iii. 78, 79, 82, 83, 84
Ophiorrhiziphyllon, *Kurz* ... iv. 403
macrobotryum, *Kurz* ... „ 403
Ophioxylon belgaumense, Wight ... ... iii. 634
ceylanicum, Wight ... ... „ 633
densiflorum, Thw. ... ... „ 633
macrocarpum, Wight ... „ 633
micranthum, Wight ... ... „ 633
neilgherrense, Wight ... „ 633
obversum, Miq. ... ... „ 632
serpentinum, Linn. ... ... „ 632
trifoliatum, Gærtn. ... ... „ 632
Ophiria paradoxa, Becc. ... vi. 411
Ophiurus, *Gærtn.* ... ... vii. 160
appendiculatus, Steud. ... „ 156
auriculatus, Trin. ... ... „ 161
corymbosus, *Gærtn.* ... „ 160
erectus, Wight ... ... „ 99
lævis, Benth. ... ... „ 158
muricatulus, Steud. ... ... „ 157
perforatus, Trin. ... vii. 158, 160
OPHRYDEÆ v. 668, 674, vi. 126, 177
Ophrys aranifera, Huds. ... vi. 26
Monorchis, Linn. ... ... „ 128
nervosa, Thunb. ... ... „ 182
Opilia, *Roxb.* ... ... i. 583
acuminata, Wall. ... ... „ 583
amentacea, *Roxb.* ... i. 574, 583
amentacea, Wall. ... ... i. 582
Cumingiana, Baill. ... ... v. 236
javanica, Miq. ... ... i. 584
manillana, Baill. ... ... v. 236
odorata, Spreng. ... ... i. 554
OPILIEÆ ... ... i. 573
Oplismenus, *Beauv.* ... ... vii. 65
acuminatus, Nees ... ... „ 66
æmulans, R. & S. ... ... „ 66
æmulus, Kunth ... ... „ 66
africanus, Beauv. ... ... „ 68
albus, R. & S. ... ... „ 68
brasiliensis, Raddi ... vii. 66, 68
bromoides, Baker ... ... vii. 66
bromoides, Beauv. ... ... „ 68
Burmanni, Thw. ... ... „ 66
Burmannii, *Beauv.* ... ... „ 68

Oplismenus Vol. Page
colonus, H. B. K. ... ... vii. 32
compositus, *Beauv.* ... ... „ 66
compositus, Kunth ... ... „ 67
compositus, Roth ... ... „ 34
Crus-galli, Dum. ... ... „ 31
Crus-pavonis, H. B. K. ... „ 31
? *cuspidatus*, Kunth... ... „ 32
decompositus, Nees ... ... „ 66
? *dubius*, Kunth ... vii. 31, 68
elatior, Beauv. ... ... vii. 66
flaccidus, R. & S. ... ... „ 66
frumentaceus, Kunth ... „ 32
? *hirsutus*, Schult. ... ... „ 35
hirtellus, R. & S. ... ... „ 66
? *hirtus*, R. & S. ... ... „ 81
Humboldtianus, Nees ... „ 68
imbecillis, R. & S. ... ... „ 66
? *indicus*, R. & S. ... ... „ 68
indicus, Wight ... vii. 67, 68
indicus, Willd. ... ... vii. 66
Jacquini, Kunth ... ... „ 66
javanicus, R. & S. ... ... „ 35
lanceolatus, Kunth ... vii. 66, 67
lanceolatus, Wall. ... ... vii. 67
lanceolatus, Wight ... ... „ 67
latifolius, Hænke ... ... „ 66
latifolius, Str. & Wint. ... „ 66
limosus, Presl ... ... „ 31
loliaceus, Beauv. ... ... „ 66
longisetus, Kunth ... ... „ 31
? *magellanicus*, R. & S. ... „ 332
muricatus, Kunth ... ... „ 31
parvifolius, Kunth ... ... „ 66
pratensis, Schult. ... ... „ 67
? *prostratus*, Edgew. ... „ 37
Pseudo-colonus, Kunth ... „ 32
sabulicolus, Kunth ... ... „ 31
scaber, Kunth ... ... „ 31
semi-alatus, Desv. ... ... „ 64
setarius, R. & S. ... ... „ 66
stagninus, Kunth ... ... „ 31
sylvaticus, R. & S. ... ... „ 67
undulatifolius, *Beauv.* ... „ 66
undulatifolius, Str. & Wint. „ 66
sp., Wall. ... ... „ 68
Opuntia Dillenii, Haw. ... ii. 657
Orania, *Zippell.* ... ... vi. 423
macrocladus, *Mart.* ... „ 423
nicobarica, Kurz ... ... „ 418
Oraoma canarana, Turcz ... i. 560
Orchidantha, N. E. Brown... vi. 264
ORCHIDEÆ ... ... v. 667, vi. 1
Orchipeda fœtida, Bl. ... ... iii. 658
Orchis, *Linn.* ... ... vi. 126
altissima, Ham. ... ... „ 137
Chusua, *D. Don* ... ... „ 127
clavata, Heyne... ... ... „ 150

Orchis Vol. Page
commelinifolia, Roxb. ... vi. 143
cubitalis, Linn. ... ... „ 157
gigantea, Sm. ... ... „ 137
grandiflora, Heyne ... ... „ 136
Hatagirea, D. Don ... ... „ 127
incarnata, Linn. ... ... „ 127
latifolia, *Linn.* ... ... „ 127
leucantha, Ham. ... ... „ 161
longicornu, Heyne ... ... „ 139
maculata, Linn. ... ... „ 127
micranthema, Ham. ... ... „ 160
mysorensis, Heyne ... vi. 135, 150
obcordata, D. Don ... ... vi. 164
pectinata, Sm. ... ... „ 137
plantaginea, Roxb. ... ... „ 140
platyphyllos, Roxb. ... ... „ 141
platyphyllos, Willd. ... ... „ 140
Roxburghii, Pers. ... ... „ 140
spathulata, *Rchb. f.* ... ... „ 127
Stracheyi, *Hk. f.* ... ... „ 128
strateumatica, Linn. vi. 103, 197
stylosanthes, Ham. ... ... vi. 143
Susannæ, Heyne ... ... „ 164
Susannæ, Linn. ... ... „ 137
tenuis, Rottl. ... ... „ 141
triplicata, Willem. ... ... v. 851
uniflora, Roxb. ... ... vi. 167
viridiflora, Sw. ... ... „ 150
Oreocnide acuminata, Kurz v. 589
sylvatica, Miq. ... ... „ 590
Oreocome Candolleana, Edgew. ii. 700
elata, Edgew. ... ... „ 700
filicifolia, Edgew. ... ... „ 700
sp., Hk. f. & T. ... ... ii. 698, 705
Oreorchis, *Lindl.* ... ... v. 709
foliosa, *Lindl.* ... ... „ 709
indica, *Hk. f.* ... v. 709, vi. 183
micrantha, *Lindl.* ... ... v. 709
Oreoseris lanuginosa, DC. ... iii. 390
lanuginosa, Wall. ... ... „ 390
? *nivea*, DC. ... ... „ 390
ovalifolia, Wall. ... ... „ 390
pusilla, DC. ... ... „ 390
Oreosolen, *Hk. f.* ... ... iv. 318
Wattii, *Hk. f.* ... ... „ 319
Origanum, *Tourn.* ... ... iv. 648
? *benghalense*, Burm. ... „ 632
? *indicum*, Roth ... iv. 632, 634
laxiflora, Royle ... ... iv. 648
Majorana, Linn. ... ... „ 648
normale, D. Don ... ... „ 648
vulgare, *Linn.* ... ... „ 648
Wallichiana, Benth. ... „ 648
watariense, Roxb. ... ... „ 627
Watsoni, T. A. Schmidt ... „ 648
Ormocarpum, *Beauv.* ... ... ii. 152
coronilloides, G. Don ... „ 152

Ormocarpum Vol. Page
sennoides, *DC.* ... ii. 152
Ormosia, *Jacks.* ... ii. 252
acuminata, Wall. ... „ 250
coarctata, Jacks. ... „ 253
floribunda, Wall. ... „ 252
glauca, *Wall.* ... „ 253
macrodisca, *Baker* ... „ 253
microsperma, *Baker* ... „ 253
parvifolia, *Baker* ... „ 253
robusta, *Wight* ... „ 252
travancorica, *Bedd.* ... „ 253
venosa, *Baker* ... „ 254
Ornitharium striatulum, Lindl. vi. 34
Ornithidium bracteatum, Wall. v. 772
imbricatum, Wall. ... „ 846
Ornithobœa, *Clarke* ... iv. 365
Parishii, *Clarke* ... „ 366
Ornithocephalochloa arenicola, Kurz ... vii. 91
Ornithochilus, *Wall.* ... vi. 76, 179
eublepharon, Hance ... vi. 76
fuscus, *Wall.* ... „ 76
striatulus, Hort. Calc. ... „ 34
Ornithogalum falcatum, Wight ... vi. 336
indicum, Kœn. ... „ 334
indicum, Roem. ... „ 335
polyphyllum, Heyne ... „ 348
Ornithopus perpusillus, Schmidt ... ii. 161
Ornitrophe allophyllus, Pers. i. 673
aporetica, Roxb. ... „ 674
asiatica, Hort. ... „ 674
Cobbe, Willd. ... „ 673
glabra, Roxb. ... „ 674
malabarica, Hb. Madr. ... „ 674
Schmiedelia, Pers. ... „ 674
serrata, Roxb. ... „ 674
villosa, Roxb. ... „ 674
Ornus floribunda, Dietr. ... iii. 605
Moorcroftiana, G. Don ... „ 606
urophylla, G. Don ... „ 605
xanthoxyloides, G. Don ... „ 606
OROBANCHACEÆ ... iv. 319
Orobanche, *Linn.* ... iv. 324
acaulis, Roxb. ... „ 320
Æginetia, Linn. ... „ 320
ægyptiaca, Pers. ... „ 327
borealis, *Turcz* ... „ 325
calotropidis, Edgew. ... „ 324
cernua, *Loefl.* ... „ 325
Clarkei, *Hk. f.* ... „ 326
Epithymum, *DC.* ... „ 325
? *fœtida*, Klotz. ... „ 325
? *Galii*, Klotz. ... „ 325
Hansii, *Kern.* ... „ 325
indica, *Ham.* ... „ 326
Orobanche Vol. Page
indica, Spreng. ... iv. 299
indica, Wall. ... „ 325
kashmirica, *Clarke* ... „ 324
Nicotianæ, *Wight* ... „ 326
pedunculata, Roxb. ... „ 320
psila, *Clarke* ... „ 327
ramosa, *Linn.* ... „ 326
Solmsii, *Clarke* ... „ 325
Orobus aureus, Stev. ... ii. 181
Emodi, Wall. ... „ 181
lævigatus, W. & K. ... „ 180
luteus, Linn. ... „ 180
orientalis, Boiss. ... „ 181
ORONTIEÆ ... vi. 492
Oropetium, *Trin.* ... vii. 366
Thomæum, *Trin.* ... „ 366
Orophea, *Bl.* ... i. 90
acuminata, *A. DC.* ... „ 91
Brandisii, *Hk. f. & T.* ... „ 91
coriacea, Thw. ... „ 93
enterocarpa, *Maing.* ... „ 92
erythrocarpa, *Bedd.* ... „ 91
Heyneana, *Hk. f. & T.* ... „ 77
? *obliqua*, Hk. f. & T. ... „ 93
polycarpa, A. DC. ... „ 91
Thomsoni, *Bedd.* ... „ 91
uniflora, *Hk. f. & T.* ... „ 90
zeylanica, *Hk. f. & T.* ... „ 90
Oroxylum, *Vent.* ... iv. 377
indicum, *Vent.* ... „ 378
Orsidice amplexicaulis, Rchb. f. ... vi. 40
Orthanthera, *Wight* ... iv. 64
viminea, *W. & A.* ... „ 64
Orthopogon æmulus, Br. ... vii. 66
agrostoides, Trev. ... „ 73
albus, Nees ... „ 68
Burmanni, Br. ... „ 68
compositus, Br. ... „ 67
Crus-galli, Spreng. ... „ 31
flaccidus, Br. ... „ 66
gonyrrhizus, Miq. ... „ 66
hirtellus, Br. ... „ 66
Junghuhnii, Nees ... „ 67
loliaceus, Spreng. ... „ 67
longeracemosus, Miq. ... „ 67
pratensis, Spreng. ... „ 67
remotus, Trin. ... „ 67
Retzii, Spreng. ... „ 31
setarius, Spreng. ... „ 66
squarrosus, Spreng. ... „ 62
sylvaticus, Miq. ... „ 67
undulatifolius, Spreng. ... „ 66
undulatus, Link ... „ 66
sp., Griff. ... „ 67
Orthoraphium Roylei, Nees vii. 233
Orthosiphon, *Benth.* ... iv. 612

Orthosiphon ... Vol. Page
bracteatus, Wight ... iv. 615
comosus, *Wight* ... „ 615
diffusus, *Benth.* ... „ 613
glabratus, Benth. ... „ 614
hispidus, Benth. ... „ 613
incurvus, *Benth.* ... „ 614
inodorus, Kœn. ... „ 613
pallidus, *Royle* ... „ 613
robustus, *Hk. f.* ... „ 614
rubicundus, *Benth.* ... „ 614
scapiger, *Benth.* ... „ 615
stamineus, *Benth.* ... „ 615
tomentosus, *Benth.* ... „ 613
? *triste*, Roth, *vide* Ocimum „ 613
verticillatus, Heyne ... „ 613
virgatus, Benth. ... „ 615
viscosus, Benth. ... „ 614
ORTHOSPERMEÆ ... ii. 605
Orthostemon erectum, Br. ... iv. 103
Hugelii, Griseb. ... „ 103
Orygia, *Forsk.* ... ii. 661
decumbens, *Forsk.* ... „ 661
Oryza, *Linn.* ... vii. 92
ciliata, Ham. ... „ 94
clandestina, A. Br. ... „ 94
coarctata, *Roxb.* ... „ 93
denudata, Steud. ... „ 92
fatua, Kœn. ... „ 92
filiformis, Ham. ... „ 93
granulata, *Nees & Arn.* ... „ 93
hexandra, Doell ... „ 94
latifolia, *Desv.* ... „ 92
montana, Ham. ... „ 93
mutica, Steud. ... „ 92
officinalis, Wall. ... „ 93
palustris, Ham. ... „ 92
palustris, Salisb. ... „ 92
platyphylla, Sch. ... „ 93
repens, Ham. ... „ 92
Ridleyi, *Hk. f* ... „ 93
rufipogon, Griff. ... „ 92
sativa, *Linn.* ... „ 92
sativa, Thw. ... „ 93
segetalis, Russ. ... „ 92
sorghoides, Steud. ... „ 92
triandra, Heyne ... „ 93
triticoides, Griff. ... „ 93
ORYZEÆ ... vii. 3, 92
Oryzopsis, Michx. ... vii. 233
æquiglumis, *Duthie* ... „ 234
? *cærulescens*, Duthie ... „ 234
divulsa, Clarke ... „ 234
Duthiei, Hack. ... „ 234
effusa, Hack. ... „ 234
kashmirensis, Hack. ... „ 234
lateralis, *Stapf* ... „ 234
Munroi, *Stapf* ... „ 234

Vol. Page
Osbeckia, *Linn.* ... ii. 513
alveolata, Bedd. ... „ 520
angustifolia, D. Don ... „ 515
aspera, *Bl.* ... „ 519
aspera, Wt. & Arn. ... „ 519
aspericaulis, *Hk. f.* ... „ 520
brachystemon, Naud. ... „ 514
buxifolia, *Arn.* ... „ 518
campestris, Wall. ... „ 518
capitata, *Benth.* ... „ 516
chinensis, *Linn.* ... „ 515
chinensis, Linn. ... „ 516
Chulesis, D. Don ... „ 522
confertiflora, Naud. ... „ 514
crinita, *Benth.* ... „ 517
crinita, Naud. ... „ 517
cupularis, *D. Don* ... „ 514
debilis, Naud. ... „ 516
decora, Wall. ... „ 515
elliptica, Naud. ... „ 520
Gardneriana, Wight ... „ 520
glabrata, Wall. ... „ 515
glauca, *Benth.* ... „ 519
glauca, Naud. ... „ 516
gracilis, *Bedd.* ... „ 518
hispidissima, *Wight* ... „ 516
japonica, Naud. ... „ 515
Kleinii, Arn. ... „ 519
Leschenaultiana, *DC.* ... „ 520
Leschenaultiana, Dalz. & Gibs. ... „ 514
Leschenaultiana, Thw. ii. 514, 515
Leschenaultiana, Wight ... ii. 514
linearis, Bl. ... „ 515
longicollis, Wall. ... „ 518
minor, Triana ... „ 519
Moonii, *Thw.* ... „ 520
muralis, Naud. ... „ 514
myrtifolia, Bl. ... „ 515
nepalensis, *Hook.* ... „ 521
nutans, *Wall.* ... „ 521
octandra, *DC.* ... „ 521
parvifolia, *Arn.* ... „ 515
polycephala, Naud. ... „ 521
pulchella, Wall. ... „ 518
reticulata, *Bedd.* ... „ 520
Rheedii, *Thw.* ... „ 515
rostrata, *D. Don* ... „ 517
rubicunda, *Arn.* ... „ 520
serialis, Naud. ... „ 516
speciosa, D. Don ... „ 522
stellata, D. Don ... „ 517
stellata, Naud. ... „ 517
stellata, *Wall.* ... „ 517
ternifolia, D. Don ... „ 517
tetrandra, Roxb. ... „ 545
truncata, *D. Don* ... „ 514

Osbeckia Vol. Page
truncata, Arn. ... ii. 514
virgata, W. & A. ... „ 521
virgata, Wight ... „ 521
Walkeri, *Arn.* ... „ 519
Wightiana, *Benth.* ... „ 519
Wightiana, Benth. ... ii. 514, 521
wynaadensis, *Clarke* ... ii. 521
zeylanica, *Willd.* ... „ 516
zeylanica, Ker ... „ 515
zeylanica, Naud. ... „ 515
zeylanica, Steud. ... „ 514
OSBECKIEÆ ... ii. 512
Osbeckioidea, Griff. ... ii. 516
Osmanthus, *Lour.* ... iii. 606
acuminata, Wall. ... „ 607
fragrans, *Lour.* ... „ 606
suavis, *King* ... „ 607
Osmelia, *Thw.* ... ii. 595
zeylanica, *Thw.* ... „ 595
Osmorhiza, *DC.* ... ii. 690
brevistylis, DC. ... „ 690
Claytoni, *Clarke* ... „ 690
laxa, Royle ... „ 690
longistylis, DC. ... „ 690
Osmothamnus fragrans, DC. iii. 472
pallidus, DC. ... „ 472
Ostodes, *Bl.* ... v. 400
appendiculata, *Hk. f.* ... „ 401
Helferi, *Muell.* ... „ 401
minor, Muell. ... „ 400
muricata, *Hk. f.* ... „ 401
paniculata, *Bl.* ... „ 400
zeylanica, *Muell.* ... „ 400
OSYRIDEÆ ... v. 229
Osyris, *Linn.* ... v. 231
arborea, *Wall.* ... „ 232
? *peltata*, Roxb. ... „ 448
rotundata, Griff. ... „ 234
Wightiana, Wall. ... „ 232
Otandra cernua, Salisb. ... vi. 17
Otanthera, *Bl.* ... ii. 522
bracteata, Korth ... „ 522
cyanoides, Triana ... „ 522
Koti-gueda, Naud. ... „ 523
moluccana, *Bl.* ... „ 522
nicobarensis, *Teysm. & Binn.* „ 522
rubro-limbata, Link & Otto „ 523
Othonnopsis, *J. & S.* ... iii. 356
intermedia, *Boiss.* ... „ 356
Otochilus, *Lindl.* ... v. 843
alba, *Lindl.* ... v. 843, vi. 195
fusca, *Lindl.* ... v. 844
lancifolia, Griff. ... „ 844
latifolia, Griff. ... „ 844
porrecta, *Lindl.* ... „ 844
Otonychium imbricatum, Bl. i. 692
Otophora, *Bl.* ... i. 680

Otophora Vol. Page
erythrocalyx, *Hiern* ... i. 680
fruticosa, Bl. ... i. 674, 680, 685
paucijuga, *Hiern* ... i 680
Otosema caudata, Benth. ... ii. 109
extensa, Benth. ... „ 109
fruticosa, Benth. ... „ 109
macrophylla, Benth. ... „ 108
Otostegia, *Benth.* ... iv. 679
limbata, *Benth.* ... „ 680
Otostemma lacunosum, Bl. ... iv. 55
Ottelia, *Pers.* ... v. 662
alismoides, *Pers.* ... „ 662
indica, Planch. ... „ 662
Ottilis zeylanica, Gærtn. ... i. 667
Oudemansia integerrima, Miq. i. 365
Ougeinia, *Benth.* ... ii. 160
dalbergioides, *Benth.* ... „ 161
Ourisia pinnata, Benth. ... iv. 288
Outea bijuga, DC. ... ii. 275
Ouvirandra undulata, Edgew. vi. 564
Oviedia mitis, Burm. ... iv. 595
OXALIDEÆ ... i. 426
Oxalis, *Linn.* ... i. 435
Acetosella, *Linn.* ... „ 436
Apodiscias, *Turcz.* ... „ 437
corniculata, *Linn.* ... „ 436
Cumingiana, Turcz. ... „ 437
gracilenta, Kurz ... „ 438
Griffithii, *Edgew. & Hk. f.* „ 436
Metziana, Miq. ... „ 438
Petersii, Klotz. ... „ 437
pusilla, Salisb. ... „ 436
Reinwardtii, Zucc. ... i. 437, 438
repens, Thunb. ... i. 436
sensitiva, Linn. ... „ 438
sensitiva, Wall. ... „ 438
sensitiva, Hb. Wight ... „ 439
sensitiva, Zucc. ... „ 437
sessilis, Ham. ... „ 437
Oxyanthe japonica, Steud. ... vii. 304
Oxyanthera, Brongn. ... vi. 87
micrantha, Brongn. vi. 87, 88
Oxybaphus, *Vahl* ... iv. 708
himalaicus, *Edgew.* ... „ 708
Oxycarpus gangetica, Ham.... i. 262
Oxydium sp., Benn. ... ii. 174
Oxygraphis, *Bunge* ... i. 21
glacialis, *Bunge* ... „ 21
polypetala, *Hk. f. & T.* ... „ 21
Oxymitra, *Bl.* ... i. 70
affinis, *Hk. f. & T.* ... „ 70
filipes, *Hk. f. & T.* ... „ 71
fornicata, *Hk. f. & T.* ... „ 71
glauca, *Hk. f. & T.* ... „ 71
latifolia, *Hk. f. & T.* ... „ 70
Maclellandii, *Hk. f. & T.* .. „ 70
macrophylla, A. DC. ... „ 73

Oxymitra Vol. Page
stenopetala, *Hk. f. & T.* ... i. 71
unonæfolia, *Hk. f. & T.* ... „ 71
Oxyramphis macrostyla, Lindl. ii. 144
macrostyla, Wall. ... ... „ 144
sericea, Grah. ... ... „ 144
stenocarpa, Klotz. ... ... „ 144
virgata, Wall. ... ... „ 144
Oxyria, *Hill* ... ... v. 58
digyna, *Hill* ... ... „ 58
elatior, Br. ... ... „ 58
reniformis, Hook. ... ... „ 58
Oxysepala ovalifolia, Wight v. 753
Oxyspora, *DC.* ... ... ii. 525
cernua, *Triana* ... ... „ 526
paniculata, *DC.* ... ... „ 525
vagans, *Wall.* ... ... „ 526
vagans, Hook. ... ... „ 525
vagans, Wall. ... ... „ 526
OXYSPOREÆ ... ... ii. 512
Oxystelma, *Br.* ... ... iv. 17
? *caudatum*, Ham. ... ... „ 20
esculentum, *Br.* ... ... „ 17
Wallichii, Wight ... ... „ 17
Oxystophyllum atropurpureum, Bl. ... ... v. 724
carnosum, Bl. ... ... „ 724
macrostoma, Hassk. ... ... „ 723
Oxytenanthera, *Munro* ... vii. 400
albo-ciliata, *Munro* ... ... „ 401
Bourdilloni, *Gamble* ... „ 403
monostigma, *Bedd.* ... ... „ 402
nigrociliata, *Munro* ... ... „ 401
parvifolia, *Brandis* ... ... „ 402
sinuata, *Gamble* ... ... „ 401
Stocksii, *Munro* ... ... „ 403
Thwaitesii, *Munro* ... ... „ 402
Oxytropis, *DC.* ... ... ii. 137
argentata, Led. ... ... „ 139
cachemirica, *Camb.* ... „ 139
chiliophylla, Royle ... ... „ 139
densa, *Benth.* ... ... „ 138
diffusa, *Led.* ... ... „ 140
floribunda, Benth. ... ... „ 138
glabra, DC. ... ... „ 140
glacialis, Benth. ... ... „ 137
humifusa, Kar. & Kir. ... „ 137
lapponica, *Gaud.* ... ... „ 137
Meinshausenii, *Schr.* ... „ 139
microphylla, *DC.* ... ... „ 139
microrhyncha, Benth. ... „ 137
mollis, *Royle* ... ... „ 137
Stracheyana, *Benth.* ... „ 138
tatarica, *Jacquem.* ... ... „ 138
Thomsoni, *Benth.* ... ... „ 138
Ozodia fœniculacea, W. & A. ii. 695

Pachycentria tuberculata, Korth. ii. 565

Pachycentria Vol. Page
Walkeri, Thw. ... ... ii. 526
Pachyderma javanicum, Bl. iii. 612
Pachygone, *Miers* ... ... i. 105
adversa, Miers ... ... „ 105
concinna, Miers ... ... „ 105
odorifera, Miers ... „ 105
ovata, *Miers* ... . „ 105
Plukenetii, Miers ... ... „ 105
PACHYGONEÆ ... ... i. 95
Pachyrhizus, *Rich.* ... ... ii. 207
angulatus, Rich. ... ... „ 207
mollis, Hassk. ... ... „ 199
trilobus, DC. ... ... „ 207
Pachysandra ? coriacea, Hook. v. 266
Pachystemon populifolius, Miq. ... ... v. 451
trilobus, Bl. ... ... „ 452
Pachystoma, *Bl.* v. 811, vi. 178
Edgeworthii, Rchb. f. ... v. 812
Fortunei, Rchb. f. ... ... „ 814
Josephi, Rchb. f. ... ... „ 815
Lindleyanum, Rchb. f. ... „ 812
malabaricum, Rchb. f. ... „ 812
montanum, Rchb. f. ... ... „ 812
parvifolium, Rchb. f. ... „ 814
senile, *Rchb. f.* ... ... „ 812
Smithianum, Rchb. f. ... „ 812
speciosum, Rchb. f. ... ... „ 812
Wightii, Rchb. f. ... ... „ 814
Pacourea Gudara, Ham. ... iii. 624
Padbruggia dasyphylla, Miq. ii 110
Padia Meyeriana, Zoll. and Mor. ... ... vii. 93
Pæderia, *Linn.* ... ... iii. 195
barbulata, Miq. ... ... „ 197
calycina, *Kurz* ... ... „ 196
erecta, Roxb. ... ... „ 197
fœtida, *Linn.* ... ... „ 195
fœtida, Benth. ... ... „ 197
fœtida, Wall. ... ... „ 196
lanuginosa, *Wall.* ... ... „ 196
lanuginosa, Kurz ... ... „ 196
lanuginosa, Wall. ... ... „ 196
? linearis, *Hk. f.* ... ... „ 197
macrocarpa, Wall. ... ... „ 196
ovata, Miq. ... ... „ 195
pilifera, *Hk. f.* ... ... „ 196
recurva, Roxb. ... ... „ 197
sessiliflora, DC. ... ... „ 195
ternata, Wall. ... ... „ 193
tetrandra, Wall. ... ... „ 160
tomentosa, *Bl.* ... ... „ 197
verticillata, *Bl.* ... ... „ 195
Wallichii, *Hk. f.* ... ... „ 196
sp., Griff. ... ... „ 197
PÆDERIEÆ ... ... iii. 21, 195
Pæderota Amherstiana, Wall. iv. 291

Vol. Page
Pæderota
cochlearifolia, Koen. ... iv. 287
minima, Koen. ... ... ,, 287
minima, Retz ... ... ,, 288
Pæonia, *Linn.* ... ... i. 30
albiflora, Pall. ... ... ,, 30
Emodi, *Wall.* ... ... ,, 30
officinalis, Hk. f. & T. ... ,, 30
PÆONIEÆ ... ... i. 2
Pajanelia, *DC.* ... ... iv. 384
multijuga, Kurz ... ... ,, 384
Rheedii, *DC.* ... ... ,, 384
Palenga zeylanica, Thw. ... v. 337
Palimbia ramosissima, DC.... ii. 709
ramosissima, Thw. ... ... ,, 710
PALMEÆ... ... ... vi. 402
Palmia bicolor, Endl. ... ... iv. 216
PANACEÆ ... ... ii. 720
Panax, *Linn.* ... ... ii. 725
aculeatum, Ait. ... ... ,, 726
armatum, Wall. ... ... ,, 723
bijugum, Wall.... ... ... ,, 725
bipinnatifidum, Seem. ... ,, 722
curcifolium, Griff. ... ... ,, 735
decompositum, Wall. ... ,, 722
? *foliolosum*, Wall. ... ... ,, 723
fragrans, Roxb. ... ... ,, 734
fruticosum, *Linn.* ... ... ,, 725
Ginseng, C. A. Mey. ... ,, 721
? *Heyneanum*, Wall. ... ,, 727
Jackianum, Wall. ... ... ,, 734
Leschenaultii, DC. ... ... ,, 724
Loureirianum, DC. ... ... ,, 726
micranthum, Wall. ... ... ,, 724
palmatum, Roxb. ... ... ,, 735
pinnatum, Lamk. ... ... ,, 734
polycarpum, Wall. ... ... ,, 734
Pseudo-ginseng, Wall. ... ,, 721
quinquefolius, Linn. ... ,, 722
secundum, Schultz ... ... ,, 734
serratum, Wall. ... ... ,, 738
spinosum, Linn. f. ... ... ,, 726
tomentosum, DC. ... ... ,, 728
tripinnatum, Wall. ... ... ,, 722
Pancratium, *Linn.* ... ... vi. 285
biflorum, *Roxb.* ... ... ,, 285
cambayense, Herb. ... ... ,, 286
longiflorum, *Roxb.* ... ... ,, 286
longiflorum, Herb. ... ... ,, 285
malabaricum, *Thw.* ... ... ,, 286
malabathricum, Herb. ... ,, 285
parvum, *Dalz.* ... ... ,, 286
tiaræflorum, Salisb. ... ... ,, 285
triflorum, *Roxb.* ... ... ,, 285
verecundum, *Ait.* ... ... ,, 285
verecundum, Wight ... ,, 286
zeylanicum, *Linn.* ... ... ,, 285
PANDANEÆ ... ... vi. 483
Pandaneæ, Wall. ... ... vi. 487
Pandanophyllum, Hassk. ... vi. 682
angustifolium, Kurz ... ,, 683
costatum, Kurz ... ... ,, 684
humile, Hassk. ... ... ,, 683
humile, Zoll. ... ... ,, 682
hypolytroides, F. Muell. ... ,, 680
immersum, Thw. ... ... ,, 683
Miquelianum, Kurz ... ,, 683
palustre, Boeck. ... ... ,, 681
palustre, Hassk. ... ... ,, 681
palustre, Kurz ... ... ,, 682
Wendlandi, Gard. Chr. ... ,, 683
zeylanicum, Kurz ... ... ,, 682
zeylanicum, Thw. ... ... ,, 682
Zippelianum, Kurz ... ,, 683
Pandanus, *Linn.* ... ... vi. 483
andamanensium, *Kurz* ... ,, 485
albus, Hort. ... ... ,, 486
atrocarpus, Griff. ... ... ,, 484
Candelabrum, Kurz ... ,, 485
caricosus, *Spreng.* ... ... ,, 484
caricosus, Miq. ... ... ,, 484
ceylanicus, *Solms* ... ... ,, 484
crassipes, Wall. ... ... ,, 484
fascicularis, *Lam.* ... ... ,, 485
fœtidus, *Roxb.* ... ... ,, 483
furcatus, *Roxb.* ... ... ,, 484
furcatus, Hassk. ... ... ,, 486
furcatus, Thw. ... ... ,, 484
graminifolius, *Kurz* ... ,, 486
horridus, Reinw. ... ... ,, 486
Houlletii, *Carr.* ... ... ,, 486
humilis, *Thw.* ... ... ,, 486
integrifolius, Lour. ... ... ,, 486
Lais, *Kurz* ... ... ,, 486
laevis, *Rumph.* ... ... ,, 486
Leram, *Jones* ... ... ,, 486
Leram, Kurz ... ... ,, 485
leucacanthus, Hassk. ... ,, 485
Linnæi, *Gaud.* ... ... ,, 486
minor, *Ham.* ... ... ,, 485
odoratissimus, Roxb. ... ,, 485
odoratus, Salisb. ... ... ,, 485
ornatus, *Kurz* ... ... ,, 486
ovatus, *Kurz* ... ... ,, 486
polycephalus, *Lam.* ... ,, 487
Rheedii, Gaud.... ... ... ,, 485
spinifructus, Dennst. ... ,, 484
turbinatus, Lodd. ... ... ,, 487
unguifer, Hk. f. ... ... ,, 485
unipapillatus, Dennst. ... ,, 485
verus, Kurz ... ... ,, 485
Yvani, *Solms* ... ... ,, 487
sp., Wall. ... ... vi. 484, 485
Panderia pilosa, Hk. f. & T. v. 11
PANGIEÆ ... ... i. 189

Vol. Page
PANICACEÆ ... ... vii. 2
PANICEÆ ... ... vii. 2, 10
Panicum, *Linn.* ... ... vii. 26
abludens, R. & S. ... ... ,, 59
acariferum, Trin. ... ... ,, 61
accrescens, Trin. ... ... ,, 57
aciculare, Desv. ... ... ,, 59
acroanthum, *Steud.* ... ,, 52
acutiglumum, Steud. ... ,, 39
adhaerens, Forsk. ... ... ,, 80
adpressum, Willd. ... ... ,, 13
adstans, Steud. ... ... ,, 25
ægyptiacum, Hort. ... ... ,, 78
ægyptiacum, Retz. .. ... ,, 13
æquatum, Nees ... ... ,, 25
æquiglume, *Hk. f.* ... ... ,, 44
affine, Nees ... ... ,, 30
affine, Poir. ... ... ,, 37
africanum, Poir. ... ... ,, 68
airoides, Br. ... ... ,, 50
albens, Steud. ... ... ,, 22
album, Poir. ... ... ,, 68
alopecuroides, Kœn. ... ,, 79
alopecuroides, Linn. ... ,, 85
Alopecuros, Lamk. ... ... ,, 87
altissimum, Brouss. ... ,, 49
ambiguum, *Trin.* ... ... ,, 33
ambiguum, Fig. & de Notar. ,, 33
ambiguum, Lapeyr. ... ... ,, 17
americanum, Linn. ... ... ,, 82
Amlisa, Ham. ... ... ,, 61
amphibium, Steud. ... ... ,, 35
amplexicaule, Poir. ... ... ,, 44
amplexicaule, Rudge .... ,, 40
amplissimum, Steud. ... ,, 55
angustatum, Edgew. ... ,, 59
angustum, Trin. ... vii. 41, 42
angustum, Wight ... ... vii. 42
antidotale, *Retz.* ... ... ,, 52
antipodum, Spreng. ... ,, 25
Aparine, Steud. ... ... ,, 80
appressum, Doell ... ... ,, 30
aquariorum, Ham. ... ... ,, 36
aquaticum, A. Rich. ... ,, 50
arabicum, Nees ... ... ,, 32
araneosum, Edgew. ... ... ,, 59
arborescens, Lamk. ... ... ,, 391
arborescens, Linn. ... ... ,, 44
arcuatum, Br. ... ... vii. 41, 51
arcuatum, Wight ... ... vii. 42
arenarium, Bieb. ... ... ,, 17
arenarium, Brot. ... ... ,, 50
argyrotrichum, Anderss. ,, 18
aristatum, Retz. ... ... ,, 67
aristidoides, Willd. ... ... ,, 85
Arnottianum, Nees ... ... ,, 43
arvense, Kunth ... ... ,, 36
Panicum Vol. Page
asiaticum, Hort. ... ... vii. 78
asperatum, Kunth ... ... ,, 55
asperrimum, Fisch. ... ... ,, 45
asperum, Koen. ... ... ,, 62
asperum, Lamk. ... ... ,, 80
asperum, Link ... ... ,, 85
assamicum, *Hk. f.* ... ... ,, 40
attenuatum, Hort. ... ... ,, 78
attenuatum, Willd. ... ... ,, 46
atro-virens, Trin. ... ... ,, 25
aurantiacum, Ham. ... ... ,, 50
auritum, *Presl* ... ... ,, 40
auritum, Hassk. ... ... ,, 39
auritum, Wall. ... ... ,, 19
australis, Rasp. ... ... ,, 25
Balbisianum, Schult. ... ,, 39
Bansium, Ham. ... ... ,, 36
barbatulum, Wall. ... ... ,, 53
barbatum, Kunth ... ... ,, 16
barbatum, Lamk. ... vii. 33, 34
barbatum, Roxb. ... ... vii. 87
barbatum, Telf. ... ... ,, 56
barbifultum, Hochst. ... ,, 66
barbinode, Trin. ... ... ,, 35
batavicum, Steud. ... ... ,, 24
beckmanniæforme, Mikan ,, 30
bengalense, Spreng. ... ... ,, 75
Benjamini, Steud. ... ... ,, 25
bicolor, Mœnch ... ... ,, 80
bicorne, Kunth ... ... ,, 13
bidentatum, Steud. ... ... ,, 67
biflorum, Lamk. ... ... ,, 25
biforme, Kunth ... ... ,, 13
blephariphyllum, Trim. ... ,, 77
brevifolium, Balb. ... ... ,, 46
brevifolium, Roxb. ... ... ,, 44
brevisetum, Doell ... ... ,, 78
brizæforme, Presl ... ... ,, 30
brizoides, Jacq. ... ... ,, 29
brizoides, Lamk. ... ... ,, 30
brizoides, Linn. ... ... ,, 32
brizoides, Retz. ... ... ,, 29
bromoides, Lamk. ... ... ,, 68
Brownianum, W. & A. ... ,, 51
Brunonianum, Griff. ... ,, 62
Burmanni, Bieb. ... ... ,, 30
Burmanni, Heyne ... vii. 21, 57
Burmanni, Retz. ... ... vii. 68
Burmanni, Schrenk ... ,, 66
cæsium, *Nees* ... ... ,, 48
cæsium, Nees ... ... ,, 32
cæspitosum, Sw. ... ... ,, 33
callosum, Hochst. ... ... ,, 45
canaliculatum, *Nees* ... ,, 43
Canaræ, Steud. ... ... ,, 12
canescens, Roth ... ... ,, 81
canescens, Wight ... ... ,, 36

Panicum Vol. Page
capillare, Linn. ... ... vii. 59
? *Careyanum*, Nees ... ... ,, 34
? *carinatum*, Presl ... ... ,, 57
carnosum, Saltzm. ... ... ,, 30
caucasicum, Trin. ... ... ,, 28
caudatum, Thunb. ... ... ,, 41
cenchroides, Rich. ... ... ,, 87
certificandum, Steud. ... ,, 67
Chamaeraphis, Nees ... ,, 56
Chintaman, Ham. ... ... ,, 47
chrysanthum, Steud. ... , 79
ciliare, Retz. ... ... ,, 13
ciliare, Thw. ... ... ,, 15
ciliare, Wight ... ... ,, 16
cimicinum, Retz. ... ... ,, 64
coccospermum, Steud. ... ,, 34
Codaea, Ham. ... ... ,, 79
colonum, *Linn.* ... ... ,, 32
coloratum, Cav. ... ... ,, 50
coloratum, Nees ... ... ,, 47
commutatum, Nees ... vii. 13, 15
compactum, Kit. ... ... vii. 78
composito-proximum, Rottl. ,, 67
compositum, Linn. ... ... ,, 67
compressum, Forsk. .. ,, 294
concinnum, Edgew. ... ,, 59
concinnum, Nees ... ... ,, 54
confertum, Rottl. ... ... ,, 32
confine, Hochst. ... ... ,, 47
confusum, Trin. ... ... ,, 49
conglomeratum, Rottl. ... ,, 41
conjugatum, Dalz. & Gibs. ,, 64
contractum, W. & A. ... ,, 41
convolutum, Beauv. ... ... ,, 50
corvipes, Stokes ... ... ,, 30
? *corymbosum*, Roxb. vii. 13, 15
corymbosum, Thw. ... ... ,, 15
coryophorum, Kunth ... ,, 42
costatum, Roxb. ... ... ,, 56
costulatum, Bojer ... ... ,, 42
courtallense, Nees & Arn. ,, 53
Crinum-ursi, Bory ... ... ,, 99
crispum, Llanos ... ... ,, 33
cruciatum, Nees ... ... ,, 14
Crus-galli, *Linn.* ... ... ,, 30
Crus-Galli, Roxb. ... ... ,, 28
Crus-galli, Wall. ... ... ,, 32
curvatum, *Linn.* ... ... ,, 42
curvatum, Linn. ... ... ,, 48
curvatum, Roxb. ... .. ,, 42
cuspidatum, Roxb. ... ... ,, 32
cuspidiglume, Steud. ... ,, 21
cynosuroides, Rottl. ... ... ,, 39
cynosuroides, Scop. ... ... ,, 80
Dactylon, Linn. ... ... ,, 289
Daltoni, Parlat. ... ... ,, 32
debile, Desf. ... ... ,, 16

Panicum Vol. Page
decompositum, Br. ... ... vii. 51
decompositum, Duthie ... ,, 50
decompositum, Nees ... ,, 67
densepilosum, Steud. ... ,, 45
densispica, Poir. ... ... ,, 87
dichotomum, Forsk. ... ,, 85
didactylum, Kunth ... ,, 13
difforme, Roth ... ... ,, 57
digitatum, Gilib. ... ... ,, 30
dilatatum, Steud. ... ... ,, 16
dimidiatum, Burm. ... ... ,, 96
dimidiatum, Heyne ... vii. 37, 91
dimidiatum, Linn. ... ... vii. 91
dispar, Steud. ... ... ,, 26
dissectum, Linn. ... ... ,, 11
dissitiflorum, Nees & Arn. ,, 15
distachyon, Hb. Madr. ... ,, 37
distachyum, *Linn.* ... ... ,, 37
distans, Trin. ... ... ,, 29
distichum, Gaud. ... ... ,, 17
dubium, Lamk. ... ... ,, 25
dubium, Sieb. ... ... ,, 30
eburneum, Trin. ... ... ,, 49
echinatum, Willd. ... vii. 30, 58
elatius, Heyne ... ... vii. 67
elatius, Linn. f. ... ... ,, 67
elegans, W. & A. ... ... ,, 246
elegantissimum, *Hk. f.* ... ,, 52
elephantipes, Nees ... ... ,, 50
Elliottii, Trin. ... ... ,, 50
elongatum, Salisb. ... ... ,, 78
elytroblepharum, Steud. ... ,, 16
eminens, Steud. ... ... ,, 16
equinum, Saltzm. ... ... ,, 35
Equisetum, Nees ... ... ,, 49
eriogonum, Schrad. ... ... ,, 13
eruciforme, Sibth. ... ... ,, 28
erythrospermum, Vahl ... ,, 78
euchroum, Steud. ... ... ,, 53
excurrens, Trin. ... ... ,, 55
extensum, Nees & Arn. ... ,, 16
fasciculatum, Griseb. ... ,, 49
fasciculatum, Nees ... ... ,, 56
festuciforme, Hochst. ... ,, 332
festucoides, Poir. ... ... ,, 59
filiforme, Heyne ... ... ,, 15
filiforme, Jacq. ... ... ,, 13
filiforme, Roxb. ... ... vii. 15, 16
fistulosum, Hochst. ... ... vii. 50
flaccidum, Koen. ... ... ,, 29
flaccidum, Wall. ... ... ,, 32
flavescens, *Sw.* ... ... ,, 56
flavescens, Moench ... ... ,, 79
flavidum, *Retz.* ... ... ,, 28
flexuosum, Retz. ... ... ,, 59
floribundum, Willd. ... ... ,, 80
floridum, Royle ... ... ,, 29

Panicum — Vol. Page
fluitans, Heyne ... vii. 36
fluitans, Hb. Madr. ... „ 29
fluitans, Retz. ... vii. 29, 30
fluviatile, Nees ... vii. 41
foliolosum, Wall. ... „ 61
Forbesianum, Nees ... „ 81
frumentaceum, Roxb. ... „ 31
fugax, Koen. ... „ 59
Gardneri, Thw. ... „ 26
germanicum, Mill. ... „ 78
gibbum, Steud. ... „ 57
glabrum, Gaud. ... „ 17
glabrum, Heyne ... „ 47
glandulosum, Nees ... „ 58
glaucum, Linn. ... „ 79
globulare, Steud. ... „ 78
glomeratum, Moench ... „ 78
gonatodes, Steud. ... „ 25
gongylodes, Jacq. ... vii. 49, 50
gonyrrhizum, Steud. ... vii. 66
grandiflorum, Trin. ... „ 39
granulare, Bojer ... „ 29
granulare, Lam. ... „ 29
Griffithii, Arn. ... „ 15
grossarium, Griff. ... „ 32
grossarium, Koen. ... vii. 34, 36
grossarium, Roxb. ... „ 34, 37
grossum, Salisb. ... vii. 32
guineense, Desf. ... „ 44
hæmatodes, Presl ... „ 32
Hasskarlii, Steud. ... „ 39
Helopus, Trin. ... vii. 35, 37
helvolum, Hb. Madr. ... vii. 84
helvolum, Linn. ... „ 79
hermaphroditum, Steud. „ 57
heteranthum, Link ... „ 58
heteranthum, Nees & Meyen „ 16
Heynii, *Roth* ... „ 59
hirsutum, Heyne ... „ 33
hirsutum, Koen. ... vii. 35, 37
hirtellum, All. ... vii. 63
hirtellum, Burm. ... „ 68
hirtellum, Walt. ... „ 30
hirticalycinum, Steud. ... „ 30
hirtum, Roth ... vii. 34, 81
hirtum, Wall. ... vii. 46
hispidulum, Lamk. ... „ 31
hispidum, Forst. ... „ 31
holcoides, Jacq. ... „ 79
holcoides, Roxb. ... „ 87
homonymum, Steud. ... „ 56
hordeiforme, Thunb. vii. 84, 85
hordeoides, Poir. ... vii. 86
horizontale, Mey. ... „ 13
horridum, Saltzm. ... „ 31
Hosti, Bieb. ... „ 31
humidorum, *Ham.* ... „ 53

Panicum — Vol. Page
humifusum, Kunth ... vii. 17
humile, *Nees* ... „ 48
humile, Aitch. ... „ 48
humile, Thunb. ... „ 80
humile, Trin. ... „ 80
hydaspicum, *Edgew.* ... „ 48
hygrocharis, Steud. ... „ 50
imbecille, Trin. ... „ 66
imberbe, Poir. ... „ 80
imperfectum, Roxb. ... „ 12
incisum, *Munro* ... „ 51
? *incomptum*, Duthie ... „ 54
incomptum, Trin. ... „ 54
incurvum, Linn. ... „ 41
indicum, *Linn.* ... „ 41
indicum, Mill. ... „ 78
indicum, Wight ... „ 42
infidum, Steud. ... „ 59
infidum, Trin. ... „ 33
insectiferum, Koen. ... „ 59
insulicola, Steud. ... „ 40
intermedium, Griff. ... „ 62
intermedium, Roth ... „ 80
intermedium, Vahl ... „ 78
interruptum, Wall. ... „ 41
interruptum, *Willd.* ... „ 40
inundatum, Kunth ... „ 41
Isachne, *Roth* ... „ 28
ischæmoides, Heyne ... „ 62
ischæmoides, Retz. ... „ 50
Ischæmum, Schreb. ... „ 17
italicum, Linn. ... „ 78
italicum, Ucria ... „ 80
japonicum, Steud. ... „ 68
javanicum, *Poir.* ... „ 35
javanicum, Kunth ... „ 35
javanicum, Poir. ... „ 64
javanicum, Thw. ... „ 33
javanum, Nees & Bühse ... „ 40
Johannæ, Linn. ... „ 41
jumentorum, Pers. ... „ 49
jumentorum, A. Rich. ... „ 47
khasianum, *Munro* ... „ 54
Kleinianum, Nees ... „ 55
Koenigii, Spreng. ... „ 35
Koenigii, Wight ... „ 28
Kotschyanum, Hochst. ... „ 36
Kunthianum, W. & A. ... „ 21
Kunthii, Steud. ... „ 59
Kurzii, *Hk. f.* ... „ 38
læve, Lamk. ... „ 49
lævigatum, Ell. ... „ 79
lævigatum, Lam. ... „ 80
lanceolatum, Heyne ... „ 37
lanceolatum, Retz. ... „ 67
latifolium, *Linn.* ... „ 39
leiogonum, Sieb. ... „ 35

Panicum Vol. Page
lene, Steud. ... ... vii. 55
lepidotum, Steud. ... ... „ 25
leptochloa, Nees ... ... „ 76
limosum, Presl ... ... „ 31
lineare, Burm. ... ... „ 289
lineare, Krock. ... ... „ 17
Linkianum, Kunth ... ... „ 13
longeracemosum, Steud. ... „ 67
longiflorum, Gmel. ... ... „ 18
longipes, *W. & A.* ... ... „ 59
longipes, W. & A. ... ... „ 49
longisetum, Poir. ... ... „ 88
longisetum, Torr. ... ... „ 31
lutescens, Weig. ... ... „ 79
luteum, Guldenst. .. ... „ 79
madagascarense, Spreng. „ 43
malaccense, Trin. ... ... „ 246
mangaloricum, Steud. ... „ 39
marginatum, Heyne... ... „ 21
marginatum, Hb. Madr. ... „ 37
marginatum, Vahl ... ... „ 33
maritimum, Hort. ... ... „ 78
mauritianum, Willd. vii. 55, 56
maximum, *Jacq.* ... ... vii 49
maximum, Wall. ...vii. 40, 52, 54
megalanthum, Steud. ... vii. 65
megiston, Schult. ... ... „ 49
mel-frugum, Hort. ... ... „ 78
Meneritana, Spreng. ... „ 25
Menieri, Koen.... ... ... „ 46
Metzii, Hochst. ... ... „ 21
Meyerianum, Nees ... ... „ 35
micrognostum, Steud. ... „ 54
microstachyum, Lamk. ... „ 41
miliaceum, *Linn.* ... ... „ 45
miliaceum, Blanco. ... ... „ 78
miliaceum, Thw. ... ... „ 46
miliare, *Lamk.* ... ... „ 46
miliare, Wall. ... ... vii. 26, 47
Milium, Pers. ... ... vii. 45
minimum, Wall. ... ... „ 79
minutulum Gaud. ... ... „ 25
mirabile, Braun ... ... „ 31
molle, Griseb. ... ... „ 35
molle, Sw. ... ... „ 35
montanum, *Roxb.* ... ... „ 53
? *montanum*, Duthie ... „ 23
montanum, Ham. ... ... „ 252
mucronatum, Heyne ... „ 47
mucronatum, Roth ... ... „ 29
mucronatum, Wall. ... ... „ 47
multibrachiatum, Hochst. „ 20
multiflorum, Roxb. ... ... „ 42
multinode, Lamk. ... ... „ 50
multinode, Presl ... ... „ 43
multisetum, Hochst. ... „ 68
muricatum, Michx. ... ... „ 31

Panicum Vol. Page
? *muricatum*, Retz. ... ... vii. 26
musciparum, Linn. ... ... „ 46
muticum, *Forsk.* ... ... „ 34
myosuroides, *Br.* ... ... „ 42
myosurus, Rich. ... vii. 40, 41
myurum, Lamk. ... vii. 40, 41
myurum, Meyer ... ... vii. 39
myurum, Wight ... ... „ 43
Myurus, *H. B. K.* ... ... „ 39
nanum, Nees ... ... „ 34
natans, Koen. ... ... „ 50
Neesianum, W. & A. ... „ 47
nemorosum, Trin. ... ... „ 58
nepalense, Spreng. ... ... „ 55
nervosum, Heyne ... ... „ 42
nervosum, Rottl. ... ... „ 16
nervosum, Roxb. ... ... „ 55
nervosum, Willd. ... ... „ 15
neurodes, Schult. ... ... „ 55
nilagiricum, Steud. ... ... „ 34
nodibarbatum, Hochst. ... „ 25
nodosum, *Kunth* ... ... „ 43
notabile, *Hk. f.* ... ... „ 32
? *notatum*, Duthie ... ... „ 47
? *notatum*, Wight ... ... „ 53
nudiglume, Hochst. ... ... „ 36
numidianum, Lamk. ... „ 35
numidianum, Presl ... ... „ 32
numidianum, Sieb. ... ... „ 30
nutans, Rottl. ... ... „ 37
obliquum, Moritz. ... ... „ 21
obliquum, Roth ... ... „ 57
orientale, Willd. ... ... „ 86
orthum, Voigt ... ... „ 59
oryzinum, Gmel. ... ... „ 31
oryzoides, Sw. ... ... „ 39
ovalifolium, *Poir.* ... vii. 44, 247
oxyphyllum, Hochst. ... „ 57
pabulare, Aitch. & Hemsl. vii. 13, 15
pallens, Sw. ... ... vii. 60
palmifolium, Koen. ... ... „ 55
palmifolium, Poir. ... ... „ 55
paludosum, Hochst. ... „ 50
paludosum, Roxb. ... ... „ 50
pamplemoussense, Steud. „ 49
papillosum, Fenzl ... ... „ 35
paractaenioides, Trin. ... „ 56
paradoxum, Rottl. ... ... „ 59
paraquayense, Steud. ... „ 35
parvulum, Trin. ... ... „ 18
paspaloides, *Pers.* ... ... „ 30
paspaloides, Heyne ... ... „ 35
paspaloides, Wall. ... ... „ 29
patens, *Linn.* ... ... „ 57
patens, Bojer ... ... „ 40
patens, Roxb. ... ... „ 25

Panicum Vol. Page
paucisetum, Steud. ... ... vii. 55
penicillatum, Willd. ... ,, 79
peninsulanum, Steud. ... ,, 67
pennatum, Hochst. ... ... ,, 16
Perrottetii, Kunth ... ... ,, 20
Petiveri, Kotschy ... ... ,, 32
Petiverii, Thw. ... ... ,, 38
Petiverii, Trin. ... vii. 34, 36, 38
phalaroides, R. & S. ... vii. 41
phleoides, Br. ... ... ,, 41
pictiglume, Steud. ... ... ,, 35
pictum, Koen. ... ... ,, 32
pilipes, *Nees & Arn.* ... ,, 57
pilosum, Dalz. & Gibs. ... ,, 31
pilosum, Roxb. & Heyne ,, 45
piluliferum, Nees ... ... ,, 24
plicatum, *Lamk.* ... vii. 55, 81
plumosum, Presl ... ... vii. 65
poæforme, Bojer ... ... ,, 91
polygamum, Hb. Madr. ... ,, 52
polygamum, Sw. ... ... ,, 49
polygonoides, Lam. ... ... ,, 25
polyrhizum, Presl ... ... ,, 13
polystachion, Ucria ... ... ,, 50
polystachyum, Heyne ... ,, 79
polystachyum, Schult. ... ,, 87
porphyrrhizos, Steud. ... ,, 47
praticolum, Saltzm. ... ,, 49
procumbens, Nees ... ... ,, 34
proliferum, *Lam.* ... ... ,, 50
propinquum, Br. ... ... ,, 18
prostratum, *Lamk.* ... vii. 33, 34
prostratum, Thw. ... ... vii. 37
pruinosum, Bernh. ... ... ,, 52
pruriens, Fisch. ... vii. 13, 15
Pseudo-colonum, Roth ... vii. 32
Pseudo-Duroa, Nees ... ,, 18
Pseudo-oryzoides, Steud. ,, 39
Pseudo-setaria, Steud.
(lapsu *Pseudostricta*) ... ,,
Pseudostricta, Steud. ... ,, 59
psilocaulum, Steud. ... ,, 80
psilopodium, *Trin.* vii. 26, 46
psilopodium, Koen. ... vii. 36
psilopodium, Trin. ... ... ,, 50
psilopodium, Wight ... ,, 46
puberulum, Kunth ... ... ,, 19
pubinode, Hochst. ... ... ,, 28
pulchellum, Spreng. ... ,, 246
pumilum, Link .. ... ,, 78
pumilum, Poir. ... ... ,, 79
punctatum, *Burm.* ... ... ,, 29
punctulatum, Arn. ... ... ,, 35
purpurascens, Opiz. ... ,, 80
purpurascens, Raddi ... ,, 35
pyramidale, ? Ham. ... ,, 75
quale Linnæi, Krock. ... ,, 80

Panicum Vol. Page
quinquangulare, Ham. ... vii. 36
racemosum, Heyne ... ... ,, 15
radicans, Bühse ... ... ,, 57
radicans, Retz. ... .. ,, 57
radicosum, Presl ... ... ,, 13
ramosum, *Linn.* ... ... ,, 36
ramosum, Heyne ... ... ,, 59
ramosum, Koen. ... ... ,, 47
reclinatum, Vill. ... ... ,, 80
relaxatum, Nees ... ... ,, 38
remotum, *Retz.* ... ... ,, 38
repens, *Linn.* ... ... ,, 49
repens, Burm. ... ... ,, 34
repens, Heyne ... ... ,, 57
repens, Roxb. ... vii. 34, 35, 37, 59
repens, Thw. ... ... vii. 50
repens, Wight ... ... ,, 37
respiciens, Hochst. ... ... ,, 80
reticulatum, Thw. ... ... ,, 48
rhabdinum, Steud. ... ... ,, 23
rhachitrichlium, *Hochst.* ,, 56
rhignon, Steud. ... ... ,, 24
Ridleyi, Hack. ... ... ,, 39
rigidum, Heyne ... vii. 47, 50
Rothii, Spreng. ... ,, 34, 81
Rottleri, Kunth ... ,, 13, 15
Rottleri ?, Wight ... ... vii. 16
Roxburghianum, Schult. ,, 50
Roxburghii, Spreng. ... ,, 47
Royleanum, Nees ... ... ,, 47
rude, Lamk. ... ... ,, 80
sabulicolum, Nees ... ... ,, 31
saccharoides, Trin. ... ... ,, 65
Sama, Ham. .. .. ,, 29
sanguinale, Burm. ... ... ,, 33
sanguinale, Linn. ... ... ,, 13
sanguinale, Pollich ... ,, 17
sanguinale, Str. & Wint. ,, 15
sanguinale, Wall. ... vii. 14, 15
sarmentosum, *Roxb.* ... vii. 54
sarmentosum, Hassk. ... ,, 35
sarmentosum, Wight ... ,, 50
saxatile, Steud. ... ... ,, 22
scabrum, Lamk. ... ... ,, 31
secundum, Heyne ... ... ,, 247
secundum, Rottl. ... ... ,, 40
segetale, Roxb. ... ... ,, 32
semi-alatum, Br. ... ... ,, 64
semiverticillatum, *Rottl.* ,, 38
semiverticillatum, Rottl. ,, 32
semiverticillatum, Wight vii. 36, 38
sericeum, Soland. ... ... vii. 60
serotinum, Hort. ... ... ,, 78
serratulum, Ham. ... ... ,, 39
serratulum, Roxb. ... ... ,, 39
setaceum, Hort. ... ... ,, 78
setarium, Lamk. ... ... ,, 66

Panicum Vol. Page
setigerum, *Retz.* ... ... vii. 36
setigerum, Retz. & Roxb. ,, 34
setigerum, Roxb. ... ... ,, 34
setosum, Hort. ... ... ,, 78
sibiricum, Hort. ... ... ,, 78
Sieberi, Link ... ... ,, 34
simplicissimum, Koen. ... ,, 60
simpliciusculum, W. & A. ,, 271
simplex, Rottl. ... ... ,, 46
sordidum, Thw. ... ... ,, 62
sparsicomum, *Nees* ... ,, 58
spicatum, Roxb. ... ... ,, 82
spiciforme, Hochst. ... ,, 41
spinescens, Br. ... ... ,, 62
squarrosum, Lam. ... ... ,, 62
squarrosum, Retz. ... ... ,, 96
stagninum, Ham. ... ... ,, 41
stagninum, Retz. ... ,, 31
stenostachyum, Thw. ... ,, 43
striatum, Spreng. ... ... ,, 45
strictum, Roxb. ... ... ,, 75
subalbidum, Kunth ... ,, 52
subcordatum, Roth ... ... ,, 34
subcordatum, Wight ... ,, 37
subeglume, *Trin.* ... ... ,, 51
subquadriparum, Trin. ... ,, 37
sulcatum, Aubl.... ... ... ,, 55
sumatrense, Roth ... ... ,, 46
sylvaticum, Lamk. ... ... ,, 67
tejucense, Nees ... ... ,, 80
tenellum, Griff. ... ... ,, 48
tenellum, Roxb. ... ... ,, 47
Teneriffæ, Br. ... ... ,, 65
tenue, Roxb. ... ... vii. 52, 60
tenuiflorum, Br. ... ... vii. 18
tenuiflorum, Hort. ... ... ,, 248
tenuifolium, Heyne ... ... ,, 15
tenuissimum, Mart. ... ... ,, 248
ternatum, Hochst. ... ... ,, 17
tetrastichum, Forsk. ... ,, 32
Thouarsianum, Nees ... ,, 56
tjicoyaense, Steud. ... ... ,, 54
? *tomentosum*, Roxb. ... ,, 80
Torreyanum, W. & A. ... ,, 51
trachypus, *Trin.* ... ... ,, 60
tricarinatum, Steud. ... ,, 44
trichocondylum, Steud. ... ,, 49
trichopus, Hochst. ... ... ,, 35
triflorum, Edgew. ... ... ,, 60
trigonum, *Retz.* ... ... ,, 56
trigonum, Thw. ... ... ,, 57
trinapalium, Ham. ... ... ,, 53
Trinii, Mor. ... ... ,, 58
triticoides, Poir. ... ... ,, 87
truncatum, Trin. ... ... ,, 30
trypheron, *Schult.* ... ... ,, 47
tuberculatum, Presl ... ,, 49

Panicum Vol. Page
turgidum, *Forsk.* ... ... vii. 44
turritum, Thunb. ... ... ,, 41
uliginosum, Roth ... ... ,, 41
? *uliginosum*, Roxb. ... ,, 50
umbrosum, Retz. ... ... ,, 36
umbrosum, Retz. & Roxb. vii. 34, 36
uncinatum, *Raddi* ... ... vii. 58
undatum, Steud. ... ... ,, 67
undulatifolium, Arduin. ,, 66
unguinosum, Hb. Banks. ,, 67
vacillans, Steud. ... ... ,, 54
vaginatum, Gren. & Godr. ,, 13
velutinum, Willd. ... ... ,, 57
Ventenatii, Steud. ... ... ,, 79
verticillatum, Linn. ... ,, 80
verticillatum, Rottl. ... ,, 79
vestitum, Nees... ... ... ,, 34
viaticum, Griff. ... ... ,, 64
viaticum, Saltzm. ... ... ,, 34
vicinum, Baily ... ... ,, 60
vilfoides, Trin. ... ... ,, 41
villosum, *Lamk.* ... ... ,, 34
villosum, Presl ... ... ,, 65
violaceum, Kleine ... ... ,, 25
violaceum, Llanos ... ... ,, 43
virescens, Salzm. ... ... ,, 80
virgatum, Roxb. ... ... ,, 47
viride, Desf. ... ... ,, 80
viride, Linn. ... ... ,, 80
viride, Poll. ... ... ,, 79
vulgare, Wallr. ... ... ,, 78
vulpinum, Willd. ... ... ,, 88
Walkeri, Steud. ... ... ,, 26
Wallichianum, Nees ... ,, 55
Wallichianum, W. & A. ... ,, 20
Walteri, Pursh. ... ... ,, 31
Wightianum, Arn. & Nees ,, 28
Wightii, Nees ... ... ,, 28
Willdenowii, Steud. ... ,, 82
zeylanicum, Arn. ... ... ,, 76
zizanioides, H. B. K. ... ,, 39
Zollingeri, Steud. ... ... ,, 22
zonale, Presl ... ... ,, 32
sp., Griff. ... ... ,, 39
sp., Hk. f. & T. ... ... ,, 42
sp., Wall. vii. 14, 15, 19, 28, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 44, 46, 47, 48, 50, 53, 54, 55, 57, 58, 75, 81, 246, 332
Panisea, *Lindl.* ... ... v. 782
apiculata, *Lindl.* ... ... ,, 783
parviflora, *Lindl.* ... ... ,, 783
reflexa, Lindl. ... ... ,, 783
uniflora, Lindl. ... ... ,, 842
Papaver, Linn. ... ... i. 116
amœnum, Lindl. ... ... ,, 117
Argemone, Linn. ... ... ,, 117

Papaver Vol. Page
  dubium, *Linn.* ... ... i. 117
  glabrum, Royle... ... ... „ 117
  hybridum, *Linn.* ... ... „ 117
  nudicaule, *Linn.* ... ... „ 117
  orientale, Linn. ... ... „ 117
  paniculatum, D. Don ... „ 119
  Rhœas, *Linn.* ... ... „ 117
  simplicifolium, D. Don ... „ 118
  somniferum, *Linn.* ... ... „ 117
PAPAVERACEÆ ... ... i. 116
Papeda Rumphii, Cat. Hort. Bog. ... ... i. 515
PAPILIONACEÆ ... ... ii. 56
Pappophorum, *Nees* ... ... vii. 301
  ? *arabicum*, Hochst. ... „ 302
  Aucheri, *J. & Sp.* ... ... „ 301
  brachystachyum, *J. & Sp.* „ 302
  elegans, *Nees* ... ... „ 301
  ? *nanum*, Steud. ... ... „ 302
  persicum, Steud. ... ... „ 301
  robustum, *Hk. f.* ... ... „ 302
  turcomanicum, Trautv. ... „ 301
  vincentianum, Schmidt ... „ 302
  ? *sp.*, Wall. ... ... „ 270
Papularia crystallina, Forsk. ii. 660
Papyrus corymbosus, Nees ... vi. 613
  dehiscens, Nees... ... ... „ 613
  elatus, Nees ... ... „ 618
  latifolius, Willd. ... ... „ 619
  Pangorei, Nees ... vi. 612, 613
  venustus, Nees ... ... vi. 618
  venustus, Schrad. ... ... „ 617
Parabæna, Miers ... ... i. 95
  ferruginea, Miers ... ... „ 96
  heterophylla, Miers ... ... „ 96
  oleracea, Miers... .. ... „ 96
  sagittata, *Miers* ... ... „ 96
Paracaryum, *Boiss.* ... ... iv. 160
  anchusoides, Benth. & Hook. „ 161
  cælestinum, *Benth.* ... ... „ 160
  glochidiatum, *Benth.* ... „ 161
  heliocarpum, *A. Kerner* ... „ 161
  himalayense, *Clarke* ... „ 162
  ? Lambertianum, *Clarke*... „ 161
  malabaricum, *Clarke* ... „ 160
  microcarpum, *Boiss.* ... „ 162
  Thomsoni, *Clarke* ... ... „ 161
  tibeticum, *Clarke* ... ... „ 162
Paracelastrus bivalvis, Miq. i. 614
Paragnathis pulchella, Spreng. vi. 167
Parameria, *Benth.* ... ... iii. 659
  glandulifera, *Benth.* ... ... „ 660
  polyneura, *Hk. f.* ... ... „ 660
Paramignya, *Wight* ... ... i. 509
  armata, *Oliv.* ... ... „ 511
  citrifolia, *Hk. f.* ... ... „ 510
  citrifolia, Oliv. ... ... „ 510

Paramignya Vol. Page
  grandiflora, *Oliv.* ... ... i. 510
  Griffithii, *Hk. f.* ... ... „ 510
  longispina, *Hk. f.* ... ... „ 511
  monophylla, *Wight* ... ... „ 510
Parapottsia, Miq. ... ... iii. 652
Parartabotrys sumatrana, Miq. i. 83
Parashorea longisperma, Kurz i. 308
  stellata, Kurz ... ... „ 304
Parastemon, *A. DC.* ... ... ii. 312
  urophyllum, *A. DC.* ... „ 312
Paratropia capitata, W. & A. ii. 731, 732
  elliptica, Miq. ... ... „ 729, 730
  heterophylla, Presl ... ... ii. 731
  macrantha, Miq. ... ... „ 729
  micrantha, Miq. ... ... „ 730
  subulata, Miq. ... ... „ 730
  terebinthacea, Arn. ... ... „ 730
  venulosa, W. & A. ... ... „ 729
  Wallichiana, W. & A. ... „ 730
Pardanthus chinensis, Ker... vi. 277
  nepalensis, Sweet ... ... „ 277
Parietaria, *Tournef.* ... ... v. 592
  bracteata, Wight ... ... „ 585
  debilis, *Forst.* ... ... „ 593
  indica, Linn. ... ... „ 581
  judaica, *Linn.* ... ... „ 592
  micrantha, Ledeb. ... ... „ 593
  punctata, Willd. ... ... „ 593
  tibethana, Bl. ... ... „ 593
  zeylanica, Linn. ... ... „ 581
Parilium Arbor-tristis, Gærtn. iii. 603
Parinarium, *Juss.* ... ... ii. 308
  asperulum, *Miq.* ... ... „ 310
  corymbosum, Miq. ... ... „ 310
  costatum, *Bl.* ?... ... ... „ 309
  dillenifolium, B. Br. ... „ 312
  excelsum, G. Don ... ... „ 312
  Griffithianum, *Benth.* ... „ 310
  Helferi, *Hk. f.* ... ... „ 311
  indicum, *Bedd.*... ... ... „ 311
  ? *Jackianum*, Benth. ii 309, 312
  multiflorum, Miq. ... ... ii. 310
  nitidum, *Hk. f.*... ... ... „ 310
  oblongifolium, *Hk. f.* ... „ 309
  polyneurum, *Miq.* ... „ 309
  salicifolium, Benth. ... „ 310
  sumatranum, Benth. ii. 309, 310
  sumatranum, Kurz ... ... ii. 311
  travancoricum, *Bedd.* ... „ 311
  Wallichianum, *Wall.* ... „ 311
Paris, *Linn.* ... ... vi. 362
  Daisua, Ham. ... ... „ 362
  imperialis, Jacquem. ... „ 362
  polyphylla, *Sm.* ... ... „ 362
Parishia, *Hk. f.* ... ... ii. 29
  insignis, *Hk. f.*... ... ... „ 30

Parishia Vol. Page
Maingayi, *Hk. f.* ... ... ii. 30
pubescens, *Hk. f.* ... ... ,, 30
Paritium gangeticum, G. Don i. 345
tiliaceum, W. & A. ... ... ,, 343
tricuspe, G. Don ... ... ,, 344
Parkia, *R. Br.* ... ... ii. 289
biglandulosa, *W. & A.* ... ,, 289
biglobosa, Benth. ... ... ,, 289
Brunonis, Grah. ... ... ,, 289
insignis, *Kurz* ... ... ,, 290
leiophylla, *Kurz* ... ... ,, 289
Roxburghii, *G. Don* ... ,, 289
Parkinsonia, *Linn.* ... ... ii. 260
aculeata, *Linn.* ... ... ,, 260
Parnassa, Jones ... ... iv. 609
Parnassia, *Linn.* ... ... ii. 401
affinis, Hk. f. & T. ... ... ,, 403
cabulica, Planch. ... ... ,, 403
foliosa, *Hk. f. & T.* ... ... ,, 402
foliosa, Drude ... ... ,, 402
Laxmanii, Pall. ... ... ,, 403
maisorensis, Hend. ... ... ,, 403
mysorensis, *Heyne* ... ... ,, 402
nubicola, *Wall.* ... ... ,, 402
Nummularia, Drude ... ,, 402
ornata, Wall. ... ... ,, 402
ovata, *Ledeb.* ... ... ,, 403
palustris, *Linn.* ... ... ,, 401
pusilla, *Wall.* ... ... ,, 403
Schmidii, Zenker ... ... ,, 402
subacaulis, Kar. & Kir. ... ,, 403
tenella, *Hk. f. & T.* ... ... ,, 403
trinervis, Drude ... ... ,, 403
Turczaninovii, Led. ... ... ,, 403
Wightiana, *Wall.* ... ... ,, 402
Parochetus, *Ham.* ... ... ii. 86
communis, *Ham.* ... ... ,, 86
maculata, R. Br. ... ... ,, 87
major, D. Don ... ... ,, 86
oxalidifolia, Royle ... ... ,, 87
Paronychia bengalensis, R. & S. ... ... iv. 731
subulata, Lamk ... ... i. 245
PARONYCHIÆ ... ... iv. 712
Parophiorrhiza khasiana, Clarke ... ... iii. 85, iv. 79
Paropsia, *Noronh.* ... ... ii. 600
malayana, *Planch.* ... ... ,, 600
vareciformis, *Mast.* ... ,, 600
Parrottia, *C. A. Meyer* ... ii. 426
Jacquemontiana, *Dcne.* ... ,, 426
Parrya, *Br.* ... ... i. 131
exscapa, *Meyer* ... ... ,, 131
lanuginosa, *Hk. f. & T.* ... ,, 132
macrocarpa, *Br.* ... ... ,, 131
platycarpa, *Hk. f. & T.* ... ,, 131
Parsonsia, *Br.* ... ... iii. 650
Parsonsia Vol. Page
acuminata, Wall. ... ... iii. 650
barbata, Bl. ... ... ,, 660
oblonga, Wall. ... ... ,, 650
ovata, Wall. ... ... ,, 652
pauciflora, Wall. ... ... ,, 650
spiralis, *Wall.* ... ... ,, 650
Parthenoxylon porrectum, Bl. v. 136
Pseudo-sassafras, Bl. ... ,, 136
Parvatia, *Dcne.* ... ... i. 108
Brunoniana, *Dcne.* ... ... ,, 108
Paspalum, *Linn.* ... ... vii. 10
adpressum, Pers. .. ... ,, 30
ægyptiacum, Poir. ... ... ,, 13
alternans, Steud. ... ... ,, 11
ambiguum, *DC.* ... ... ,, 17
annulatum, Fluegge ... ,, 20
auriculatum, Presl ... ... ,, 11
bicorne, Lam. ... ... ,, 13
bicrurulum, Saltzm. ... ,, 11
bicrurum, Saltzm. ... ... ,, 12
bifarium, Edgew. ... vii. 11, 18
blepharophorum, R. & S.... vii. 13
brachiatum, Trin. ... ... ,, 12
brevifolium, Fluegge ... ,, 18
cartilagineum, Presl ... ,, 11
chinense, Nees ... ... ,, 18
ciliare, DC. ... ... ,, 13
ciliare, Retz. ... ... ,, 15
ciliatifolium, Trin. ... ... ,, 12
ciliatum, Lam. ... ... ,, 12
coloratum, Rich. ... ... ,, 11
Commersoni, Lamk. ... ,, 11
compactum, *Roth* ... ... ,, 12
concinnum, Steud. ... ... ,, 19
conjugatum, *Berg.* ... ... ,, 11
consanguineum, Kunth ... ,, 13
coromandelianum, Lamk. ,, 11
corymbosum, Kunth ... ,, 13
costatum, Hochst. ... ... ,, 12
Dactylon, DC. ... ... ,, 289
debile, Poir. ... ... ,, 16
depressum, Steud. ... ... ,, 12
didactylum, Saltzm. ... ,, 12
Digitaria, Poir. ... ... ,, 12
dimidiatum, Linn. ... ... ,, 11
dissectum, Kniphof ... ,, 294
dissectum, Linn. ... ... ,, 11
distachyon, Willd. ... ... ,, 12
distans, Nees ... ... ,, 13
distichum, *Linn.* ... ... ,, 12
dolichopus, Trin. ... ... ,, 12
eriophorum, Willd. ... ... , 12
Fernandesianum, Colla ... ,, 12
filiculme, Nees ... ... ,, 18
filiculme, Str. & Wint. ... ,, 18
filiforme, Steud. ... ... ,, 13
firmum, Trin. ... ... ,, 11

Paspalum Vol. Page
fissifolium, Nees ... ... vii. 12
flexuosum, Klein ... ... „ 11
fluitans, Ell. ... ... „ 20
frumentaceum, Rottb. ... „ 11
furcatum, Fluegge ... ... „ 12
geniculatum, Heyne ... „ 12
granulare, Trin. ... vii. 18, 19
Griffithianum, C. Mull. ... vii. 20
heteranthum, *Hk. f.* ... „ 16
hirsutum, Poir.... ... ... „ 12
hirsutum, Retz. ... ... „ 11
Houttuynii, H. C. Hall ... „ 11
humifusum, Heyne ... ... „ 17
inæquale, Link ... ... „ 13
ischnocaulon, Trin. ... ... „ 19
jubatum, *Griseb.* ... ... „ 19
Kleinianum, Presl ... ... „ 12
Kora, Forst. ... ... „ 12
Kora, Willd. ... ... , 11
littorale, Br. ... ... „ 12
longiflorum, *Retz.* ... ... „ 17
longiflorum, Retz. ... ... „ 12
longifolium, Roxb. ... ... „ 11
longissimum, Hochst. ... „ 12
maculosum, Trin. ... ... „ 12
mauritanicum, Nees ... „ 11
metabolon, Steud. ... ... „ 11
Metzii, Steud. ... ... „ 11
Michauxianum, Kunth ... „ 12
miliaria, C. Muell. ... ... „ 12
minutiflorum, Steud. ... „ 18
mollicomum, Kunth ... „ 35
mollipilum, Steud. ... ... „ 11
nematodes, Schult. ... ... „ 18
notatum, Fluegge ... ... „ 12
nutans, Lam. ... ... „ 12
obtusatum, Nees ... ... „ 12
obtusifolium, Trin. ... ... „ 12
orbiculare, Forst. ... ... „ 11
oxyanthum, Steud. ... ... , 13
paniculatum, Jacq. ... ... „ 15
pedicellare, *Trin.* ... ... „ 19
pedicellatum, Nees ... ... „ 19
pennatum, *Hk. f.* ... ... „ 16
Perrottetii, *Hk. f.* ... ... „ 20
platycaule, Willd ... ... „ 12
polystachyum, Br. ... ... „ 11
porrigens, Arn. ... ... „ 12
praecox, Walt. ... ... „ 289
protensum, Trin. ... ... „ 12
puberulum, R. & S. ... ... „ 11
pubescens, Br. ... ... „ 11
pubescens, Muhlb. ... ... „ 12
punctatum, Fluegge ... „ 20
reimarioides, Brongn. ... „ 13
Renggeri, Steud. ... ... „ 12
repens, Roxb. ... ... „ 12

Paspalum Vol. Page
reptans, Poir. ... ... vii. 12
Royleanum, *Nees* ... ... „ 18
Royleanum, Steud. ... ... „ 19
sanguinale, *Lamk.* ... ... „ 13
scrobiculatum, *Linn.* ... „ 10
serpentinum, Hochst. ... „ 12
succinctum, Trin. ... ... „ 20
sumatrense, Roth ... ... „ 11
supinum, Bosc. ... ... „ 12
tenue, Gærtn. ... ... „ 12
ternatum, *Hk. f.* .. ... „ 17
Thunbergii, Kunth ... ... „ 11
trachyanthum, Nees ... „ 19
tristachyum, Leconte ... „ 12
umbellatum, Lam. ... „ 289
vaginatum, Sw. ... ... „ 12
venustum, Forst. f. ... ... „ 11
Zollingeri, Steud. ... ... „ 11
sp., Griff. ... ... „ 19
sp., Wall. ... ... vii. 11, 18, 19
Paspalus sp., Wall. ... vii. 12, 13
Passerina annua, Wikstr. ... v. 194
costata, Griff. ... ... „ 196
diarthronoides, Griff. ... „ 194
racemosa, Wikstr. ... ... „ 196
Stelleri, Wikstr. ... ... „ 196
Passiflora, *Linn.* ... ... ii. 599
caloneura, Kurz ... ... „ 600
fœtida, Linn. ... ... „ 599
geminiflora, D. Don ... ... „ 600
Heyneana, Wall. ... ... „ 600
Leschenaultii, *DC.* ... ... „ 599
nepalensis, *Wall.* ... ... „ 600
penangiana, Wall. ... ... „ 603
singaporeana, Wall.... .. „ 601
suberosa, Linn. ... ... „ 599
Walkeriæ, Wight ... ... „ 599
PASSIFLOREÆ... ... ... ii. 598, 599
Pastinaca Candolleana, W.& A. ii. 715
glauca, Dalz. ... ... „ 709
grandis, Dalz. & Gibs. ... „ 710
Hookeriana, Wight ... ... „ 715
ligusticifolia, Wight ... „ 715
rigens, Wight ... ... „ 715
Sprengeliana, Wight ... „ 716
sp., *Hk. f. & T.* ... ii. 711, 712, 713
Patonia parvifolia, Wight ... i. 84
Walkeri, Wight ... ... i. 84, iii. 561
Patrinia, *Juss.* ... ... iii. 210
graveolens, Hance ... ... „ 210
Jatamansi, D. Don ... ... „ 211
monandra, *Clarke* ... ... „ 210
ovata, Bunge ... ... „ 210
Pattonia macrantha, Wight vi. 18
Paullinia asiatica, Linn. ... i. 497
Pavetta, *Linn.* ... ... iii. 149
Ackeringæ, Teysm. & Binn. „ 144

Pavetta Vol. Page
alba, Vahl ... iii. 150
angustifolia, Thw. ... „ 151
? *aristata*, Wall. ... iii. 104, 153
Bandhuca, Miq. ... iii. 145
breviflora, *DC.* ... „ 151
Brunonis, *Wall.* ... „ 152
Brunonis, Miq. ... „ 139
Brunonis, Wight ... „ 150
? *canarica*, Bedd. ... „ 106
canescens, Wall. ... „ 150
cerberæfolia, Miq. ... „ 102
coccinea, Bl. ... „ 145
? *coffeacea*, Wall. ... „ 153
compactiflora, *Kurz* ... „ 153
congesta, Miq. ... „ 146
Finlaysoniana, Wall. ... „ 150
fulgens, Miq. ... „ 146
Gleniei, *Thw.* ... „ 152
graciliflora, Wall. ... „ 150
hispidula, *W. & A.* ... „ 151
humilis, *Hk. f.* ... „ 151
incarnata, Bl. ... „ 145
indica, *Linn.* ... „ 150
indica, Linn. ... „ 150
indica, Wall. ... „ 150
involucrata, *Thw.* ... „ 152
Lobbii, Teysm. & Binn. ... „ 146
longifolia, Miq. ... „ 105
? *lucens*, Br. ... „ 106
macrocoma, Miq. ... „ 143
macrophylla, Bl. ... „ 143
mollis, Wall. ... „ 150
naucleiflora, *Wall.* ... „ 152
nilagirica, Bedd. ... „ 107
? *oblonga*, Wall. ... „ 153
opaca, Miq. ... „ 147
pendula, Miq. ... „ 141
petiolaris, Wall. ... „ 150
polyantha, Wall. ... „ 150
Rothiana, DC. ... „ 150
salicifolia, Bl. ... „ 146
siphonantha, Dalz. ... , 151
subcapitata, *Hk. f.* ... „ 150
Teysmanniana, Miq. ... „ 143
tomentosa, Roxb. ... „ 150
velutina, Wall. ... „ 150
villosa, Heyne ... „ 150
weberæfolia, Br. ... „ 102
weberæfolia, Wall. ... „ 105
Wightiana, Wall. ... „ 102
Wightii, *Hk. f.* ... „ 152
Wyckii, Hassk. ... „ 144
sp., Bedd. ... „ 106
Pavia indica, Wall. ... i. 675
khassyana, Voigt ... „ 675
punduana, Wall. ... „ 675
Pavonia, *Cav.* ... i. 330
Pavonia Vol. Page
acerifolia, Lk. & Otto ... i. 338
arabica, *Hochst.* ... „ 331
ceratocarpa, *Dalz.* ... „ 331
glechomifolia, *A. Rich.* ... „ 330
grewioides, Hochst. ... „ 332
odorata, *Willd.* ... „ 331
procumbens, Boiss. ... „ 330
propinqua, *Garcke* ... „ 332
repanda, Spr. ... „ 330
Romborua, Wall. ... „ 331
rosea, Wall. ... „ 331
sidoides, Horn. ... „ 331
zeylanica, *Cav.* ... „ 331
Payanelia (*vide* Pajanelia)... iv. 384
Payena, *A. DC.* ... iii. 547
Griffithii, Kurz ... „ 543
lucida, *A. DC.* ... „ 547
Maingayi, *Clarke* ... „ 547
malaccensis, *Clarke* ... „ 547
paralleloneura, *Kurz* ... „ 548
Pechea sub-cylindrica, Pourr. vii. 236
Pectis meifolia, Wall. ... iii. 308
PEDALINEÆ ... iv. 386
Pedalium, *Linn.* ... iv. 386
Murex, *Linn.* ... „ 386
Pedicularis, *Linn.* ... iv. 306
abrotanifolia, Bieb. ... „ 309
abrotanifolia, Hk. f. & T. „ 309
Alberti, Regel ... „ 310
aspleniifolia, *Floerke* ... „ 315
aspleniifolia, Wall. ... „ 315
? *avana*, Wall. ... „ 405
bella, *Hk. f.* ... „ 313
bicornuta, *Klotz.* ... „ 312
brevifolia, *D. Don* ... „ 307
Brunoniana, Wall. ... „ 307
carnosa, *Wall.* ... „ 313
cheilanthifolia, *Schrenk* ... „ 308
Clarkei, *Hk. f.* ... „ 310
comosa, Linn. ... „ 316
curvipes, *Hk. f.* ... „ 316
denudata, *Hk. f.* ... „ 309
elephantoides, Benth. ... „ 314
Elephas, Boiss. ... „ 314
Elwesii, *Hk. f.* ... „ 312
excelsa, *Hk. f.* ... „ 311
eximia, Watt ... „ 312
fissa, *Turcz.?* ... „ 316
flagellaris, *Benth.* ... „ 315
flexuosa, *Hk. f.* ... „ 308
furfuracea, *Wall.* ... „ 316
globifera, *Hk. f.* ... „ 308
gracilis, *Wall.* ... „ 307
himalaica, Klotz. ... „ 313
Hoffmeisteri, Klotz. ... „ 313
Hookeriana, Wall. ... „ 313
integrifolia, *Hk. f.* ... „ 308

Pedicularis Vol. Page
Korolkowi, Regel iv. 308
labellata, Jacquem. „ 313
lachnoglossa, *Hk. f.* „ 311
lanigera, Wall. „ 307
lasiostachys, Bunge „ 316
macrantha, *Klotz.* „ 311
megalantha, *D. Don* „ 312
microcalyx, *Hk. f.* „ 315
mollis, *Wall.* „ 309
pectinata, *Wall.* „ 306
pectinata, Hk. f. & T. „ 306
Perrottetii, *Benth.* „ 317
polygaloides, *Hk. f.* „ 317
porrecta, *Wall.* „ 307
Portenschlagii, Saut. „ 315
punctata, Dcne. „ 313
pycnantha, *Boiss.* „ 310
pyramidata, Royle „ 306
resupinata, Linn. „ 314
rhinanthoides, *Schrenk* „ 314
robusta, *Hk. f.* „ 306
rubens, Steph. „ 316
siphonantha, *D. Don* „ 313
Stevenii, Bunge „ 309
stricta, Wall. „ 307
tenuirostris, *Benth.* „ 307
trichoglossa, *Hk. f.* „ 310
tubiflora, *Fisch.* „ 314
tubiformis, Klotz. „ 314
venusta, Schangin. „ 316
versicolor, *Wahlb.* „ 316
verticillata, *Linn.* „ 309
Wallichii, Bunge „ 315
zeylanica, *Benth.* „ 317
sp., Hk. f. & T. iv. 308, 309, 310, 311, 312, 313, 315, 316, 317
sp., Strach. & Winterb. iv. 311
Pedilanthus tithymaloides, Poit. v. 239
Pedilonum biflorum, Bl. v. 727
secundum, Bl. „ 730
Peganum, *Linn.* i. 486
Harmala, *Linn.* „ 486
Pegia ? Colebrookiana, Wight ii. 40
nitida, Coleb. „ 28
Pelargonium grossularioides i. 435
Peliosanthes, *Andr.* vi. 265
albida, *Baker* „ 267
Bakeri, *Hk. f.* „ 267
campanulata, Wall. „ 266
courtallensis, *Wight* „ 266
Griffithii, *Baker* „ 266
humilis, *Andr.* „ 266
humilis, Baker „ 267
longifolia, Steud. „ 266
macrophylla, *Wall.* „ 266
neilgherriensis, *Wight* „ 266
Peliosanthes Vol. Page
Teta, *Andr.* vi. 265
Teta, Wall. „ 266
violacea, *Wall.* „ 266
violacea, Wall. „ 265
Pellacalyx, *Korth.* ii. 440
axillaris, *Korth.* „ 440
Pellaianthus, Hk. f. v. 786, 809
Pellionia, *Gaud.* v. 559
acaulis, *Hk. f.* „ 562
ambigua, *Wedd.* „ 560
bulbifera, *Hk. f.* „ 560
burmanica, *Hk. f.* „ 561
Daveauana (lapsu Duvauana) *N. E. Br.* „ 560
frutescens, Bl. „ 562
Griffithiana, *Wedd.* „ 559
Helferiana, *Wedd.* „ 561
heteroloba, *Wedd.* „ 559
Heyneana, *Wedd.* „ 561
javanica, *Wedd.* „ 561
lævigata, Bl. „ 562
procridifolia, *Kurz* „ 562
stenocarpa, *Wedd.* „ 560
Peltandra flexuosa, Thw. v. 287
longipes, Wight „ 287
parvifolia, Wight „ 287
Peltanthera solanacea, Roth iii. 650
Peltophorum, *Vogel* ii. 257
dasyrachis, *Kurz* „ 257
ferrugineum, *Benth.* „ 257
Peltophorus, Desv. vii. 154
Myurus, Desv. „ 154
Pemphis, *Forst.* ii. 572
acidula, *Forst.* „ 573
angustifolia, Roxb. „ 573
Penicillaria alopecuroides, Sw. vii. 82
chinensis, Nees vii. 82, 85
ciliaris, Ham. vii. 87
ciliata, Willd. „ 82
cylindrica, R. & S. vii. 82, 84
fallax, Fig. & Not. vii. 82
involucrata, Schult. „ 82
nigritarum, Schlecht. „ 82
Plukeneti, Link „ 82
Raddiana, Fig. & Not. „ 82
Roxburghii, A. Br. & Bouché „ 82
Sieberiana, Schlecht. „ 82
solitaria, Stokes „ 82
spicata, Willd. „ 82
typhoidea, Fig. & Not. „ 82
sp., Wall. „ 82
Pennisetum, *Pers.* vii. 82
alopecuroides, Spreng. vii. 82, 85
Alopecuros, *Steud.* vii. 84
amoenum, A. Rich. „ 87
araneosum, Edgew. vii. 59, 86
asperifolium, Kunth vii. 86

Pennisetum Vol. Page
aureum, Dalz. & Gibs. ... vii. 84
barbatum, Schult. ... ... „ 87
borbonicum, *Kunth* ... „ 88
breve, Nees ... ... „ 87
cenchroides, *Rich.* ... ... „ 88
cereale, Trin. ... ... „ 82
chinense, Steud. ... ... „ 85
ciliare, Ham. ... ... „ 87
ciliare, Link ... ... „ 88
ciliatum, Parl. ... ... „ 87
compressum, *Br.* ... ... „ 85
Cornucopiæ, Heyne ... „ 300
cylindricum, Sw. ... ... „ 82
cynosuroides, Wall. ... ... „ 85
dasystachyum, Desv. ... „ 87
dichotomum, *Delile* ... „ 85
distylum, Guss. ... ... „ 88
elatum, Hochst. ... ... „ 86
elegans, Nees ... ... „ 87
fasciculatum, Trin. ... ... „ 86
flaccidum, *Griseb.* ... ... „ 84
flavescens, Presl ... ... „ 87
giganteum, Tenore ... ... „ 82
glaucum, Br. ... ... „ 79
gracile, Benth. ... ... „ 87
Griffithii, Munro ... ... „ 86
helvolum, Br. ... ... „ 79
hirsutum, Nees ... ... „ 87
Hohenackeri, Hochst. ... „ 84
holcoides, Schult. ... ... „ 87
hordeiforme, Spreng. ... „ 85
imberbe, Edgew. ... ... „ 86
implicatum, Steud. ... ... „ 87
incomptum, Nees ... ... „ 88
intertextum, Ham. ... ... „ 87
intertextum, Schlecht. ... „ 87
japonicum, Trin. ... ... „ 85
lanatum, *Klotz.* ... vii. 84, 89
lanatum, Ham. ... ... vii. 87
lanuginosum, Edgew. ... „ 59
lanuginosum, Hochst. ... „ 87
Linnaei, Kunth ... ... „ 82
macrochætum, Jacq. ... „ 78
macrostachyum, Fresen. ... „ 86
megastachyum, Steud. ... „ 82
mongolicum, Franch. ... „ 84
Myurus, Parl. ... ... „ 87
nepalense, Griseb. ... ... „ 84
nepalense, Spreng. ... ... „ 89
nigricans, Trin. ... ... „ 85
orientale, *Rich.* ... ... „ 86
pallidum, Nees ... ... „ 87
parviflorum, *Trin.* ... ... „ 86
pedicellatum, *Trin.* .. „ 86
persicum, Boiss. & Bühse „ 86
petreum, Steud. ... ... „ 88
phalariforme, Steud. ... „ 86

Pennisetum Vol. Page
phalaroides, Schult. ... vii. 85
plumosum, Hochst. ... ... „ 284
polystachyum, Schult. ... „ 87
Prieurii, *Kunth* ... ... „ 89
purpurascens, H. B. K. ... „ 87
respiciens, A. Rich. ... ... „ 80
Richardi, Kunth ... ... „ 87
rufescens, Spreng. ... ... „ 88
Ruppellii, Steud. ... ... „ 86
sericeum, Munro ... ... „ 84
setosum, *Rich.* ... ... „ 87
Sieberi, Kunth ... ... „ 87
sinaicum, Dcne. ... ... „ 86
spicatum, R. & S. ... ... „ 82
tenue, Fig. & Not. ... ... „ 86
tenuispiculatum, Steud. ... „ 87
tiberiadis, Boiss. ... ... „ 86
triflorum, Nees ... ... „ 86
triticoides, R. & S. ... ... „ 87
typhoideum, *Rich.* ... ... „ 82
uniflorum, H. B. K. ... ... „ 87
? Vahlii, Kunth ... ... „ 88
variabile, Fig. & Not. ... „ 86
verticillatum, Br. ... ... „ 80
violaceum, Hort. ... ... „ 87
violaceum, Rich. ... ... „ 82
viride, Br. ... ... „ 81
sp., Wall. ... ... vii. 87, 88
Pentabothra, *Hk. f.* ... ... iv. 18
nana, *Hk. f.* ... ... „ 19
Pentace, *Hassk.* ... ... i. 381
burmannica, *Kurz* ... ... „ 381
triptera, *Mast.* ... ... „ 382
Pentacme siamensis, Kurz ... i. 304
suavis, A. DC. ... ... „ 304
Pentaglottis suberifolia, Wall.
vide *Pentapetes* ... ... i. 369
tomentosa lapsu *Pentapetes tomentosa* ... ... i. 373
Pentaloba ? bengalensis, Wall. i. 186
lanceolata, Wall. ... ... „ 188
macrophylla, Wall. ... ... „ 187
Roxburghii, Wall. ... ... „ 186
zeylanica, Arn. ... ... „ 187
Pentanema radiatum, Boiss. iii. 297
Pentanura, *Bl.* ... ... iv. 4
khasiana, *Kurz* ... ... „ 4
sp., Benth. ... ... „ 4
Pentapanax, *Seem.* ... ... ii. 723
Leschenaultii, *Seem.* ... „ 724
Leschenaultii, Seem. ... „ 725
parasiticum, *Seem.* ... ... „ 724
racemosum, *Seem.* ... ... „ 724
subcordatum, *Seem.* ... „ 724
umbellatum, Seem. ... ... „ 725
Pentapetes, *Linn.* ... ... i. 371
acerifolia, Cav. ... ... „ 368

Pentapetes Vol. Page
phœnicea, *Linn.* ... ... i. 371
suberifolia, Linn. lapsu *Pentaglottis* ... ... i. 367, 369
tomentosa, Wall. vide *Pentaglottis* ... ... i. 373
Pentaphragma, *Wall.* ... ... iii. 437
begoniæfolium, *Wall.* ... „ 437
Pentaptera angustifolia, Roxb. ii. 447
Arjuna, Roxb. ... ... „ 447
bialata, Roxb. ... ... „ 449
coriacea, Roxb. ... ... „ 448
crenulata, Roxb. ... ... „ 448
glabra, Roxb. ... ... „ 447
macrocarpa, Wall. ... ... „ 448
paniculata, Roxb. ... ... „ 448
pyrifolia, Presl ... ... „ 448
pyrifolia, Wall. ... ... „ 453
Roxburghii, Tul. ... ... „ 452
Saja, Wall. ... ... „ 448
tomentosa, Roxb. ... ... „ 447
undulata, Wall. ... ... „ 455
Pentapterygium, *Klotz.* ... iii. 449
flavum, *Hk. f.* ... ... „ 450
Hookeri, *Clarke* ... ... „ 450
Listeri, *King* ... ... „ 450
rugosum, *Hk. f.* ... ... „ 450
serpens, *Klotz.* ... ... „ 449
Pentapyxis, *Hk. f.* ... ... iii. 17
stipulata, *Hk. f.* ... ... „ 17
sp., Hk. f. ... ... „ 16
Pentasacme, *Wall.* ... ... iv. 28
caudatum, *Wall.* ... ... „ 28
Wallichii, *Wight* ... ... „ 28
Pentaspadon, *Hk. f.* ... ... ii. 28
? velutinus, *Hk. f.* ... ... „ 28
Pentatropis, *Br.* ... ... iv. 19
microphylla, *W. & A.* ... „ 20
microphylla, Wall. ... ... „ 19
spiralis, *Dcne.* ... ... „ 19
Pentsteira lapsu *Peristeira* ... iv. 277
dichotoma, Griff. ... ... „ 278
? *grandiflora,* Griff. ... ... „ 277
paniculata, Griff. ... ... „ 279
racemosa, Griff. ... ... „ 278
Peperomia, *Ruiz & Pav.* ... v. 96
Candolleana, Miq. ... ... „ 98
ceylanica, Miq. ... ... „ 98
confusa, *Hk. f.* ... ... „ 98
courtallensis, Miq. ... ... „ 98
courtallensis, Thw. ... ... „ 98
dindigulensis, *Miq.* ... ... „ 98
exigua, *Miq.* ... ... „ 97
Heyneana, *Miq.* ... ... „ 99
Heyneana, Wight ... ... „ 98
moulmeiniana, *Cas. DC.* ... „ 97
portulacoides, *A. Dietr.* ... „ 98
pseudo-rhombea, *Cas. DC.* „ 97

Peperomia Vol. Page
reflexa, *A. Dietr.* ... ... v. 99
Thomsoni, *Hk. f.* ... ... „ 97
Thwaitesii, Cas. DC. ... „ 98
Wightiana, *Miq.* ... ... „ 98
? *Wightiana,* Cas. DC. ... „ 98
? *Wightiana,* Wight. ... „ 98
sp., Hk. f. & T. ... ... „ 97
Peplidium, *Delile* ... ... iv. 287
humifusum, *Delile* ... ... „ 287
Peplis indica, Willd. ... ... ii. 566
Peracarpa, *Hk. f. & T.* ... iii. 437
carnosa, *Hk. f. & T.* ... „ 437
Peraphora robusta, Miers ... i. 105
Perdicium semifloscualre, Ham. ... ... iii. 391
triflorum, Ham. ... ... „ 388
Pereiria medica, Lindl. ... i. 99
Pergularia, *Linn.* ... ... iv. 37
Calesiana, Ham. ... ... „ 37
coromandeliana, Dcne. ... „ 38
crocea, Zipp. ... ... „ 36
exilis, Spreng. ... ... „ 44
glabra, Linn. ... ... iii. 651
minor, *Andr.* ... ... iv. 38
minor, Roxb. ... ... „ 38
montana, Dcne. ... ... „ 38
odoratissima, Sm. ... ... „ 38
odoratissima, Wight ... ... „ 38
pallida, *W. & A.* ... ... „ 38
parviflora, Bl. ... ... „ 34
puberula, *Miq.* ... ... „ 38
tinctoria, Spreng. ... ... „ 34
Periandra cæspitosa, Camb. i. 243
Pericampylus, *Miers* ... ... i. 102
aduncus, Miers ... ... „ 102
assamicus, Miers ... ... „ 102
incanus, *Miers* ... ... „ 102
membranaceus, Miers ... „ 102
Pericopsis, *Thw.* ... ... ii. 252
Mooniana, *Thw.* ... ... „ 252
Perilla, *Linn.* ... ... iv. 646
elata, D. Don ... ... iv. 644, 646
fruticosa, D. Don ... „ 643, 646
leptostachya, D. Don ... iv. 644
macrostachya, Benth. ... „ 646
ocimoides, *Linn.* ... ... „ 646
polystachya, D. Don ... ... „ 646
Periplexis rigida, Wall. ... v. 337
sp., Wall. ... ... „ 337
Periploca, *Linn.* ... ... iv. 11
aphylla, *Dcne.* ... ... „ 12
calophylla, *Falc.* ... ... „ 12
emetica, Retz. ... ... „ 13
esculenta, Linn. f. ... ... „ 17
hydaspidis, *Falc.* ... ... „ 12
indica, Willd. ... ... „ 5
khasiana, Benth. ... „ 4

Periploca — Vol. Page
reticulata, Roth ... ... iv. 26
sylvestris, Willd. ... ... „ 29
tunicata, Herb. Madr. ... „ 24
tunicata, Retz. ... ... „ 23
PERIPLOCEÆ ... ... iv. 1, 4
Peripterygium quinquelobum, Hassk. ... ... i. 597
? *Peristeira* vide *Pentsteira* iv. 277
Peristrophe, *Nees* ... ... iv. 554
acuminata, *Nees* ... ... „ 555
bicalyculata, *Nees* ... ... „ 554
Blumeana, Nees ... ... „ 555
dichotoma, Hassk. ... ... „ 543
fera, *Clarke* ... ... „ 556
gracilis, Nees ... ... „ 555
grandiflora, Parish ... ... „ 556
jalappæfolia, Nees ... ... „ 557
Kotschyana, Nees ... ... „ 554
lanceolaria, *Nees* ... ... „ 555
montana, *Nees* ... ... iv. 552, 556
pubigera, Nees ... ... iv. 536
rivinoides, Wall. ... ... „ 555
speciosa, *Nees* ... ... „ 556
tinctoria, *Nees* ... ... „ 556
tinctoria, Nees ... ... „ 556
undulata, *Nees* ... ... „ 555
sp., Griff. ... ... „ 556
Peristylus aristatus, Lindl. vi. 158
aristatus, Thw. ... ... „ 158
brachyphyllus, A. Rich. ... „ 159
brevilobus, Thw. ... ... „ 159
chloranthus, Lindl. ... ... „ 163
constrictus, Lindl. ... ... „ 161
elatus, Dalz. ... ... „ 162
exilis, Wight ... ... „ 158
fallax, Lindl. ... ... „ 129
goodyeroides, Lindl. ... ... „ 161
gracilis, Bl. ... ... „ 157
grandis, Bl. ... ... „ 161
Hamiltonianus, Lindl. ... „ 160
lancifolius, A. Rich. ... „ 160
Lawii, Wight ... ... „ 162
Parishii, Rchb. f. ... ... „ 162
persimilis, Wight ... ... „ 160
plantagineus, Lindl. ... „ 162
Richardianus, Wight ... „ 156
robustior, Wight ... ... „ 160
spiralis, A. Rich. ... ... „ 159
Pernettya repens, Zoll. ... iii. 457
Perobachne secunda, Presl ... vii. 217
Peronema, *Jack* ... ... iv. 599
canescens, *Jack* ... ... „ 599
heterophyllum, Miq. lapsu C. „ 599
Perotis, *Ait.* ... ... vii. 98
Burmanni, Steud. ... ... „ 98
cubana, Wright ... ... „ 98
glabrata, Steud. ... ... „ 98
Perotis — Vol. Page
hordeiformis, Nees ... ... vii. 98
latifolia, *Ait.* ... ... „ 98
laxifolia, Beauv. ... ... „ 98
longiflora, Nees ... ... „ 98
patula, Nees ... ... „ 98
polystachya, Hb. Heyne .. „ 71
polystachya, Willd. ... ... „ 141
rara, Br. ... ... „ 98
scabra, Willd. ... ... „ 98
spicaeformis, Beauv. ... „ 98
Perowskia, *Karel.* ... ... iv. 652
abrotanoides, *Karel.* ... „ 652
atriplicifolia, *Benth.* ... „ 652
Persea grandis, Nees ... v. 143, 146
incrassata, Nees ... ... v. 126
lucida, Bl. vide Phoebe ... „ 143
peduncularis, Nees ... ... „ 144
Pseudo-sassafras, Zoll. ... „ 136
Tamala, Spreng. ... ... „ 128
PERSEACEÆ ... ... v. 116
Persica ? saligna, Royle ... ii. 313
vulgaris, Mill. ... ... „ 313
Persicaria virginiana, Gaertn. v. 31
Pestalozzia laxa, Thw. ... ... ii. 633
pedata, Zoll. & Mor. ... „ 633
Petalidium, *Nees* ... ... iv. 416
barlerioides, *Nees* ... ... „ 416
patulum, Dalz. & Gibs. ... „ 412
Petaloma alternifolia, Roxb. ii. 452
Petilium imperiale, J. St. Hil. vi. 354
Petrocarya dillenifolia, Steud. ii. 312
excelsa, Jack ... ... ii. 309, 312
sumatrana, Jack ... ... ii. 309
Petrosciadium cæspitosum, Edgew ... ... ii. 689
Petunga, *DC.* ... ... iii. 120
longifolia, *DC.* ... iii. 120, iv. 711
microcarpa, DC. ... ... iii. 120
Roxburghii, *DC.* ... ... „ 120
variabilis, Hassk. ... ... „ 120
venulosa, *Hk. f.* ... ... „ 121
PEUCEDANEÆ ... ... ii. 666, 670
Peucedanum, *Linn.* ... ... ii. 708
anamallayense, *Clarke* ... „ 710
ceylanicum, *Gardn.* ... „ 710
Dhana, *Ham.* ... ... „ 709
dissectum, DC. ... ... „ 701
glaucum, *DC.* ... ... ii. 709, 710
glaucum, Hk. f. & T. ... ii. 712
glaucum, Wall. ... ... „ 709
grande, *Clarke* ... ... „ 710
graveolens, *Benth.* ... ... „ 709
ramossisimum, *Wall.* ... „ 709
sikkimense, *Clarke* ... ... „ 710
? skardicum, *Clarke* ... „ 711
Sowa, Kurz ... ... „ 709
Thomsoni, *Clarke* ... ... „ 711

Peucedanum Vol. Page
Wallichianum, DC. ... ... ii. 700
sp., Hk. f. & T. ... ... „ 711
Phaca astragalina, DC. ... ii. 124
cachemerica, Benth. ... „ 126
frigida, Linn. ... ... „ 130
Hoffmeisteri, Klotz. ... ... „ 121
lapponica, DC. ... ... „ 137
longicaulis, Benth. ... ... „ 126
Vogelii, Webb. ... ... „ 121
Phacellaria, *Benth.* ... ... v. 235
compressa, *Benth.* ... ... „ 235
rigidula, *Benth.* ... ... „ 235
Wattii, *Hk. f.* ... ... „ 236
Phacelurus, Griseb. ... ... vii. 152
Phacordylis areolata, Griff. v. 239
Phæanthus, *Hk. f. & T.* ... i. 72
malabaricus, *Bedd.* ... ... „ 72
nutans, *Hk. f. & T.* ... ... „ 72
Phæcasium, *Cass.* ... ... iii. 398
lampsanoides, *Cass.* ... ... „ 398
pulchrum, Rchb. ... ... „ 398
Phaenopus (*Phenopus*) *orientalis*, Boiss. ... ... iii. 404
Phæocordylis areolata, Griff. v. 239
Phagnalon, *Cass.* ... ... iii. 287
acuminatum, Boiss. ... ... „ 288
denticulatum, Clarke ... „ 288
niveum, *Edgew.* ... ... „ 288
Phajus, *Lour.* ... ... v. 816
albus, *Lindl.* ... v. 818, vi. 192
australis, F. Muell ... ... vi. 191
Bensoniæ, Hemsl. ... ... „ 192
bicolor, Lindl. ... ... v. 816
bicolor, Veitch ... ... vi. 191
? *Blumei*, Lindl. ... ... v. 816
callosus, *Lindl.* ... ... „ 817
Carronii, F. Muell. ... ... vi. 191
Dodgsoni, Dean ... ... v. 818
grandifolius, Lindl. ... ... „ 816
grandifolius, Lour. ... ... „ 816
grandifolius, Veitch ... vi. 191
leucophæus, F. Muell. ... „ 191
luridus, *Thw.* ... ... v. 817
maculatus, *Lindl.* v. 817, vi. 192
Marshallianus, Rchb. f. vide Thunia ... ... v. 818
mishmensis, *Rchb. f.* ... „ 817
nanus, *Hk. f.* ... ... vi. 192
veratrifolius, *Lindl.* v. 816, vi. 191
Wallichii, *Lindl.* v. 816, vi. 191
Phakellanthus multiflorus, Zoll. vi. 676
Phalænopsis, *Bl.* ... ... vi. 29, 178
amabilis, Bl. ... ... vi. 29
antennifera, Rchb. f. ... „ 31
Cornu-cervi, *Par. & Rchb. f.* „ 29
Esmeralda, *Rchb. f.* ... ... „ 31
fuscata, *Rchb. f.* ... ... „ 31
Phalænopsis Vol. Page
Kunstleri, *Hk. f.* ... ... vi. 30
Lowii, *Rchb. f.* ... ... „ 30
Mannii, *Rchb. f.* ... ... „ 30
Parishii, *Rchb. f.* ... ... „ 31
speciosa, *Rchb. f.* ... ... „ 30
tetraspis, *Rchb. f.* ... ... „ 30
violacea, *Teysm. & Binn.* „ 29
Wightii, Rchb. f. ... ... „ 32
Phalangium Adenanthera, Poir. vi. 337
alatum, Ham. ... ... „ 333
alatum, Wall. ... ... „ 334
attenuatum, Wight ... ... „ 335
falcatum, Wall. ... ... „ 336
indicum, Kunth ... ... „ 335
nepalense, Lindl. ... ... „ 335
niveum, Poir. ... ... „ 336
oligospermum, Wight ... „ 336
ornithogaloides, Schweinf. „ 334
? *parviflorum*, Wight ... „ 336
tuberosum, Dalz. & Gibs. „ 335
tuberosum, Wight ... ... „ 334
PHALARIDEÆ ... ... vii. 5, 220
Phalaris, *Linn.* ... ... vii. 220
ambigua, Fig. & Notar. ... „ 221
americana, Ell. ... ... „ 221
aquatica, Ait. ... ... „ 221
arenaria, Willd. ... ... „ 237
arundinacea, *Linn.* ... „ 221
aspera, Retz. ... ... „ 237
bulbosa, Desf. ... ... „ 221
canariensis, Linn. ... ... „ 220
canariensis, Wall. ... ... „ 221
capensis, Thunb. ... ... „ 221
colorata, Beauv. ... ... „ 221
cristata, Forsk. ... ... „ 245
hispida, Thunb. ... ... „ 146
intermedia, Bosc. ... ... „ 221
minor, *Retz.* ... ... „ 221
muricata, Forsk. ... ... „ 97
nepalensis, Trin. ... ... „ 221
oryzoides, Linn. ... ... „ 94
paniculata, Ait. ... ... „ 237
paradoxa, Linn. f. ... ... „ 220
pectinata, *Roth* ... ... „ 221
picta, Hort. ... ... „ 221
setacea, Forsk. ... ... „ 85
vaginiflora, Forsk. ... ... „ 235
velutina, Forsk. ... ... „ 14
zizanioides, Linn. ... ... „ 186
Phaleria, *Jack* ... ... v. 199
cauliflora, *Benth.* ... ... „ 199
PHALERIEÆ ... ... v. 192
Phanera Blancoi, Benth. ... ii. 278
bidentata, Benth. ... ... „ 279
bracteata, Benth. ... ... „ 282
diphylla, Benth. ... ... „ 278
diptera, Miq. ... ... „ 285

Phanera Vol. Page
elongata, Benth. ... ... ii. 281
excelsa, Bl.... ... ... " 283
ferruginea, Benth. ... ... " 283
Finlaysoniana, Benth. ... " 278
glabrifolia, Benth. ... ... " 281
glauca, Benth. ... ... " 283
Griffithiana, Benth. ... " 283
integrifolia, Benth. ... ... " 279
lucida, Benth. ... ... " 278
macrostachya, Benth. ... " 282
nervosa, Benth. ... ... " 283
phœnicea, Benth ... ... " 283
purpurea, Benth. ... ... " 284
retusa, Benth. ... ... " 279
rufa, Benth. ... ... " 280
semibifida, Benth. ... ... " 280
Vahlii, Benth. ... ... " 279
variegata, Benth. ... ... " 284
velutina, Benth. ... ... " 280
sp., Benth. ... ... " 285
Pharbitis, Chois. ... ... iv. 199
barbata, G. Don ... ... " 199
barbigera, G. Don ... ... " 193
diversifolia, Lindl. ... ... " 199
hederacea, Chois. ... ... " 199
laciniata, Dalz. ... ... " 200
Nil, Chois.... ... ... " 199
punctata, G. Don ... ... " 199
Purshii, G. Don ... ... " 199
variifolia, Dcne. ... ... " 199
Pharnaceum Cerviana, Linn. ii. 663
depressum, Linn. ... ... i. 245
distichum, Linn. ... ... ii. 663
Mollugo, Linn. ... ... " 662
occultum, Forsk. ... ... " 664
parviflorum, Roth ... ... " 662
pentagonum, Roxb. ... ... " 662
pentaphyllum, Spreng. ... " 663
spathulatum, Spreng. ... " 664
strictum, Spreng. ... ... " 663
triphyllum, Spreng. ... " 663
Pharus aristatus, Retz. ... vii. 95
ciliatus, Retz. ... ... " 94
natans, Russ. ... ... " 95
urceolatus, Roxb. ... ... " 95
PHASEOLEÆ ... ... ii. 58
Phaseolus, *Linn.* ... ... ii. 200
aconitifolius, *Jacq.* ... ... " 202
adenanthus, *G. F. Meyer* " 200
alatus, Roxb. ... ... " 200
amarus, Roxb. ... ... " 200
angustifolius, Wall. ... ... " 206
aureus, Ham. ... ... " 203
calcaratus, *Roxb.* ... ... " 203
circinalis, Ham. ... ... " 219
cirrhosus, H. B. K. ... ... " 200
coccineus, Lam. ... ... " 200

Phaseolus Vol. Page
compressus, DC. ... ... ii. 200
cornutus, Bl. ... ... " 202
decurrens, Grah. ... ... " 196
difformis, Wall. ... ... " 207
dolichoides, Roxb. ... ... " 206
farinosus, Linn. ... ... " 203
fuscus, *Wall.* ... ... " 204
fusiformis, Grah. ... ... " 206
glaber, Roxb. ... ... " 203
glabrescens, Steud. ... ... " 203
gonospermus, DC. ... ... " 200
Grahamianus, *W. & A.* ... " 201
grandis, *Dalz. & Gibs.* ... " 202
grandis, Wall. ... ... " 204
hæmatocarpus, DC. ... ... " 200
hirtus, Retz. ... ... " 203
hirtus, Wall. ... ... " 203
inamœnus, Linn. ... ... " 200
lucens, Wall. ... ... " 207
lunatus, *Linn.* ... ... " 200
Max, Roxb. ... ... " 203
multiflorus, Willd. ... ... " 200
Mungo, *Linn.* ... ... " 203
Mungo, Wall. ... ... " 203
nanus, Linn. ... ... " 200
oblongus, DC. ... ... " 200
obovatus, Grah. ... ... " 205
pauciflorus, *Dalz.* ... ... " 202
psoraleoides, W. & A. ... " 201
puberulus, H. B. K. ... " 200
pubescens, Bl. ... ... " 203
pulniensis, Wight ... ... " 206
radiatus, Linn. ... ... " 203
repens, Grah. ... ... " 205
Roxburghii, W. & A. ... " 203
rostratus, Wall. ... ... " 200
saponaceus, DC. ... ... " 200
semierectus, *Linn.* ... ... " 201
senegalensis, Guill. & Perr. " 200
sepiarius, Dalz. ... ... " 206
setulosus, Dalz. ... ... " 203
sphæricus, DC. ... ... " 200
sublobatus, Wall. ... ii. 202, 203
subvolubilis, Ham. ... ... ii. 203
tenuicaulis, *Baker* ... ... " 201
torosus, Roxb. ... ... " 204
trilobus, *Ait.* ... ... " 201
trilobus, Wall. ... ... " 202
trinervius, *Heyne* ... ... " 203
truxillensis, H. B. K. ... " 200
tumidus, DC. ... ... " 200
tunkinensis, Lour. ... ... " 200
velutinus, *Grah.* ... ... " 204
vexillatus, Linn. ... ... " 206
vulgaris, *Linn.* ... ... " 200
vulgaris, Wall. ... ... " 200
Wightianus, Grah. ... ... " 203

Phaseolus ... Vol. Page
Wightii, W. & A. ... ii. 203
Xuaresii, Zucc. ... „ 200
Phaylopsis, *Willd.* ... iv. 416
parviflora, *Willd.* ... „ 417
Phelipæa ægyptiaca, Boiss. iv. 326
ægyptiaca, Hk. f. & T. ... „ 327
Calotropidis, Walp. ... „ 324
cytinoides, Reuter ... „ 323
indica, G. Don ... „ 326
ramosa, C. A. Meyer ... „ 327
subacaulis, Benth. ... „ 321
tubulosa, Schrenk ... „ 324
Phellandrium stoloniferum, Roxb. ... ii. 696
sp., Wall. ... „ 682
Phenax pentandrus, Bl. ... v. 580
Sonneratii, Wedd. ... v. 477, 580
Phenopus (vide Phaenopus)
Phialacanthus, *Benth.* ... iv. 523
Griffithii, *Benth.* ... „ 523
Philadelphus, *Linn.* ... ii. 407
coronarius, *Linn.* ... „ 407
corymbosus, Wall. ... „ 406
nepalensis, Loud. ... „ 407
tomentosus, Wall. ... „ 407
triflorus, Wall. ... „ 407
Philagonia fraxinifolia, Hook. i. 490
procera, DC. ... „ 490
sambucina, Bl. ... „ 490
Phillyrea indica, Lour. ... iii. 613
paniculata, Roxb. ... „ 615
ramiflora, Roxb. ... „ 611
robusta, Roxb. ... „ 614
terminalis, Roxb. ... „ 615
PHILODENDREÆ ... vi. 491
Philodendron ? peregrinum, Kunth ... vi. 526
PHILYDRACEÆ ... vi. 363
Philydrum, *Banks* ... vi. 363
lanuginosum, *Banks* ... „ 363
Phippsia, *Br.* ... vii. 240, 421
algida, R. Br. ... „ 240, 310
himalaica, Hk. f. ... „ 240, 311
Phlebocalymna, *Griff.* ... i. 589
Griffithiana, *Mast.* ... „ 590
Lobbiana, *Mast.* ... „ 590
Phlebochiton extensum, Wall. ii. 28
Phlebophyllum angustifolium, Benth. ... iv. 434
Kunthianum, Nees ... „ 434
Phleum, *Linn.* ... vii. 236
alpinum, *Linn.* ... „ 236
arenarium, *Linn.* ... „ 237
asperum, *Jacq.* ... „ 237
crinitum, Schreb. ... „ 245
Hænkeanum, Presl ... „ 236
monspeliense, Koel. ... „ 245
Phleum ... Vol. Page
nigricans, Willd. ... vii. 237
ovatum, Jacquem. ... „ 237
paniculatum, Huds. ... „ 237
pratense, Linn. ... „ 236
ramosum, Gilib. ... „ 237
schœniodes, Linn. ... „ 236
ventricosum, Mœnch ... „ 237
viride, All. ... „ 237
Phlogacanthus, *Nees* ... iv. 510
albiflorus, Bedd. ... „ 515
asperulus, *Nees* ... „ 512
asperulus, Wall. ... „ 511
curviflorus, *Nees* ... „ 511
cymosus, Kurz. ... „ 514
elongatus, *T. Anders.* ... „ 513
grandis, Bedd. ... „ 515
guttatus, *Nees* ... „ 512
insignis, Kurz ... „ 514
Jenkinsii, *Clarke* ... „ 513
latifolius, Wight ... „ 510
parviflorus, *T. Anders.* ... „ 512
pubinervius, *T. Anders.* ... „ 513
pulcherrimus, T. Anders. ... „ 514
thyrsiflorus, *Nees* ... „ 512
tubiflorus, *Nees* ... „ 511
vitellinus, T. Anders. ... „ 512
Wallichii, *Clarke* ... „ 511
sp., Hk. f. & T. ... „ 513
Phlomis, *Linn.* ... iv. 691
alba, Blanco ... „ 672
aspera, Willd. ... „ 690
biflora, Roxb. ... „ 683
biflora, Vahl ... „ 683
bracteosa, *Royle* ... „ 693
breviflora, *Benth.* ... „ 693
calycina, Roxb. ... „ 679
cashmeriana, *Royle* ... „ 692
Cephalotes, Roth ... „ 689
chinensis, Retz. ... „ 681
cordata, Royle ... „ 693
diffusa, Herb. Rottl. ... „ 689
eriostoma, Heyne ... „ 686
esculenta, Roxb. ... „ 690
hirta, Heyne ... „ 687
lamiifolia, Royle ... „ 693
latifolia, Royle ... „ 693
linifolia, Roth ... „ 691
macrophylla, *Wall.* ... „ 692
montana, Roth ... „ 682
nepetæfolia, Linn. ... „ 691
nutans, Roth ... „ 688
obliqua, Ham. ... „ 690
oreophila, Kar. & Kir. ... „ 692
parviflora, Benth ... „ 693
Plukenetii, Roth ... „ 690
rotata, *Benth.* ... „ 694
rugosa, *Benth.* ... „ 693

Phlomis Vol. Page
setigera, *Falc.* ... ... iv. 693
simplex, Royle ... ... „ 693
spectabilis, *Falc.* ... ... „ 692
Stewartii, *Hk. f.* ... ... „ 692
stricta, Heyne ... ... „ 688
urticæfolia, Vahl ... ... „ 680
zeylanica, Linn.... ... ... „ 689
zeylanica, Roxb. ... ... „ 691
Phoberos acuminatus, Thw. i. 191
Arnottianus, Thw. ... ... „ 191
crenatus, W. & A. ... ... „ 191
Hookerianus, Thw. ... ... „ 191
lanceolatus, W. & A. ... „ 191
macrophylla, W. & A. ... „ 190
Rhinanthera, Benn.... ... „ 190
Roxburghii, Benn. ... ... „ 190
Wightianus, W. & A. ... „ 191
Phoebe, *Nees*... ... ... v. 141
angustifolia, *Meissn.* ... „ 141
attenuata, *Nees* ... ... „ 143
attenuata, Miq. ... ... „ 143
declinata, *Nees* ... ... „ 142
fuscans, Meissn. ... v. 142, 910
glaucescens, Meissn. „ 142, 910
glaucescens, Nees ... ... v. 140
lanceolata, *Nees* ... ... „ 141
latifolia, Champ. ... ... „ 136
ligustrina, Nees ... ... „ 142
lucida, Bl., lapsu *Persea* ... „ 143
malaccensis, Meissn. ... „ 143
micrantha, Meissn. ... ... „ 135
opaca, *Bl.* ... ... „ 143
pallida, *Nees* ... ... „ 142
paniculata, *Nees* ... v. 136, 142
pubescens, Nees ... ... v. 142
sericea, Nees ... ... „ 139
tavoyana, *Hk. f.* ... ... „ 143
? *umbelliflora*, Nees ... ... „ 145
villosa, Wight ... ... „ 140
Wightii, Meissn. ... ... „ 142
Phœnicanthemum, Miq. ... v. 204
Bennetianum, Miq. ... ... „ 206
coccineum, Miq. ... ... „ 206
pentapetalum, Miq. ... ... „ 206
PHŒNICEÆ ... ... vi. 404
Phœnicoidea, Griff. ... ... vi. 425
Phœnix, *Linn.* ... ... vi. 424
acaulis, *Ham.* ... ... „ 426
acaulis, Miq. ... ... „ 427
Andersoni, Hort. Calc. ... „ 425
cycadifolia, Regel ... ... „ 428
dactylifera, Linn. ... ... „ 424
farinifera, *Roxb.* ... ... „ 426
humilis, *Royle* ... ... „ 426
humilis, Royle ... ... „ 427
Loureirii, Kunth ... ... „ 427
Ouseleyana, Griff. ... ... „ 427
Phœnix Vol. Page
paludosa, *Roxb.* ... ... vi. 427
pedunculata, Griff. ... ... „ 427
pusilla, Gaertn. ... ... „ 425
pusilla, Lour. ... ... „ 427
? *pusilla*, Trim. ... ... „ 426
robusta, *Hk. f.* ... ... „ 427
Roebelinii, O'Brien ... ... „ 427
rupicola, *T. Anders.* ... „ 425
siamensis, Miq.... ... ... „ 427
sylvestris, *Roxb.* ... ... „ 425
sylvestris, Thw.... ... ... „ 425
sylvestris? Wall. ... ... „ 427
zeylanica, *Trim.* ... ... „ 425
zeylanica, Hort. ... ... „ 425
Phoenixopus, Cass. ... ... iii. 403
Pholidocarpus, *Bl.* ... ... vi. 436
? *Ihur*, Miq. ... ... „ 436
macrocarpa, *Becc.* ... ... „ 436
Pholidota, *Lindl.* ... ... v. 844
advena, *Rchb. f.* ... ... „ 846
articulata, *Lindl.* ... ... „ 844
calceata, *Rchb. f.* ... ... „ 846
carnea, Lindl. ... ... „ 847
Convallariæ, *Hk. f.* ... ... „ 846
Griffithii, *Hk. f.*... ... ... „ 845
imbricata, *Lindl.* ... ... „ 845
khasiana, Rchb. f. ... ... „ 844
micrantha, Hk. f. v. 847, vi. 195
obovata, *Hk. f.* ... ... v. 845
pallida, Lindl. ... ... „ 846
parviflora, *Hk. f.* ... ... vi. 195
protracta, *Hk. f.* ... ... v. 845
recurva, *Lindl.*... ... ... „ 844
rubra, *Lindl.* ... ... „ 847
suaveolens, Lindl. ... ... „ 832
undulata, Lindl. ... ... „ 847
Photinia, *Lindl.* ... ... ii. 380
? *arguta*, Wall.... ... ii. 379, 382
Blumei, Dcne. ... ... ii. 380
? *dubia*, Lindl. ... ... „ 371
dubia, Wall. ... ... „ 371
dubia, Wenzig ... ... „ 371
eugenifolia, Lindl. ... ... „ 381
Griffithii, *Dcne.* ... ... „ 381
integrifolia, *Lindl.* .. ... „ 381
integrifolia, Miq. ... ... „ 381
Lindleyana, *W. & A.* ... „ 380
longifolia, Dcne. ... ... „ 370
micrantha, Dcne. ... ... „ 381
mollis, *Hk. f.* ... ... „ 381
Notoniana, *W. & A.* ... „ 380
Notoniana, Wall. ... ... „ 380
polyneura, King ... ... „ 377
serrulata, Lindl. ... ... „ 380
subsessilis, King ... ... „ 371
Phragmites, *Trin.* ... vii. 303, 421
bifaria, Wight ... ... vii. 304

Phragmites Vol. Page
chilensis, Steud. ... ... vii. 303
cincta, Clarke ... ... „ 305
communis, *Trin.* ... ... „ 303
? *Emodi*, Arn. & Nees ... „ 303
hispanica, Nees ... ... „ 303
humilis, Not. ... ... „ 303
isiaca, Rchb. ... ... „ 304
Karka, *Trin.* ... ... „ 304
longivalvis, Steud. ... ... „ 303
mauritanica, Kunth ... „ 303
nepalensis, Nees ... ... „ 304
pumila, Griseb. ... ... „ 304
Roxburghii, Steud. ... ... „ 304
vulgaris, Trin. ... ... „ 304
Zollingeri, Steud. ... ... „ 305
Phreatia, *Lindl.* ... ... v. 810
elegans, *Lindl.* ... ... „ 810
minutiflora, *Lindl.* ... ... „ 811
Myosurus, *Lindl.* ... ... „ 810
Myosurus, Rchb. f. ... ... „ 810
nana, *Hk. f.* ... v. 811, vi. 191
parvula, *Benth.* ... ... v. 811
perpusilla, *Benth.* ... ... „ 811
uniflora, Wight .. ... „ 788
Phryma, *Linn.* ... ... iv. 561
leptostachya, *Linn.* ... „ 562
PHRYMEÆ ... ... iv. 560
Phrynium, *Willd.* ... ... vi. 258
Cadellianum, *King* ... ... „ 260
capitatum, *Willd.* ... ... „ 258
dichotomum, Korn. ... ... „ 258
dichotomum, Roxb. ... ... „ 258
Griffithii, *Baker* ... ... „ 260
imbricatum, *Roxb.* ... ... „ 259
macrostachyum, *Wall.* ... „ 259
musaceum, Wall. ... ... „ 259
parviflorum, *Roxb.* ... ... „ 259
spicatum, *Roxb.* ... ... „ 259
spicatum, Griff. ... ... „ 260
sumatranum, Miq. ... ... „ 260
virgatum, Roxb. ... ... „ 258
zeylanicum, *Benth.* ... ... „ 260
Phtheirospermum, *Bunge* iv. 304, 734
glandulosum, *Benth.* ... iv. 304
Parishii, *Hk. f.* ... ... „ 304
Phyla chinensis, Lour. ... iv. 563
Phyllagathis, *Bl.* ... ... ii. 541
rotundifolia, *Bl.* ... ... „ 541
Phyllamphora mirabilis, Lour. v. 69
PHYLLANTHEÆ ... ... v. 240
Phyllanthus, *Linn.* ... ... v. 285
acutus, *Wall.* ... ... „ 301
acutus, Wall. ... ... „ 292
affinis, *Muell.* ... ... „ 304
alatus, Bl. ... ... „ 293
albicans, Wall. ... ... „ 329
albizzoides, *Hk. f.* .. ... „ 289

Phyllanthus Vol. Page
anabaptizatus, *Muell.* ... v. 302
anceps, Heyne ... ... v. 293, 295
anceps, Hb. Madr. ... ... v. 285
Andersonii, Muell. ... ... „ 320
andrachnoides, Willd. ... „ 293
anomalus, Muell. ... ... „ 305
arboreus, Muell. ... ... „ 316
asperus, *Muell.* ... ... „ 327
assamicus, Muell. ... ... „ 320
bacciformis, Ham. ... ... „ 335
bacciformis, Hb. Madr. ... „ 299
bacciformis, Linn. ... ... „ 285
baeobotryoides, *Wall.* ... „ 291
Baillonianus, *Muell.* ... „ 300
bicolor, Muell. ... ... „ 323
brachylobus, Muell. ... .. „ 313
brevipes, *Hk. f.* ... ... „ 297
canaranus, Muell. ... ... „ 311
cantonienses, Hornem. ... „ 293
cernuus, Ham. ... ... „ 330
Chamissonis, Klotz. ... ... „ 288
Cheremila, Roxb. ... ... „ 304
Cicca, Muell. ... ... „ 304
cinerascens, Wall. ... ... „ 331
cinereus, *Muell.* ... ... „ 303
Clarkei, *Hk. f.* .. .. „ 297
coccineus, Muell. ... ... „ 308
columnaris, *Muell.* .. ... „ 291
cordifolius, Wall. ... ... „ 284
coriaceus, *Wall.* ... ... „ 292
cyanospermus, *Muell.* ... „ 305
dalbergioides, Wall. ... „ 288
Daltoni, Muell. ... ... „ 320
debilis, *Ham.* ... ... „ 299
debilis, Wight ... ... „ 296
depressus, Russell ... v. 295, 296
distichus, *Muell.* ... ... v. 304
diversifolius, Miq. ... ... „ 321
echinatus, Ham. ... ... „ 293
elegans, *Wall.* ... ... „ 300
Emblica, *Linn.* ... ... „ 289
Emblica, Wall. ... ... „ 290
emblicoides, Muell. ... ... „ 290
fagifolius, Muell. ... ... „ 317
fimbriatus, *Muell.* ... ... „ 302
flaccidus, Thw. ... ... „ 293
flueggeiformis, Muell. ... „ 289
frondosus, *Wall.* ... ... „ 292
fruticosus, Heyne 296
Gardneri, Thw. ... ... „ 295
Gardnerianus, Baill. ... „ 295
glaucifolius, Wall. ... v. 322, 330
glaucogynus, Muell. ... ... v. 325
glaucus, *Wall.* ... ... „ 288
glaucus, Wall. ... ... v. 284, 328
glomeratus, Roxb. ... ... v. 289
gomphocarpus, *Hk. f.* ... „ 301

Phyllanthus Vol. Page
gracilipes, Muell. ... ... v. 301
Griffithii, *Muell.* ... ... „ 294
griseus, Wall. ... v. 288, 289, 328
? *gymnanthus*, Baill. ... v. 345
hakgalensis, *Thw.* ... ... „ 291
Hamiltonianus, *Muell.* ... „ 304
Helferi, Muell. ... ... „ 312
Heyneanus, Muell. ... v. 302, 323
hirsutus, Muell. ... ... v. 311
Hoffmeisteri, Klotz. ... „ 284
Hohenackeri, Muell. ... „ 314
Hookeri, Muell. ... ... „ 294
hysteranthus, Muell. ... „ 305
indicus, *Muell.* ... ... „ 305
javanicus, Poir. ... ... „ 293
juniperinoides, Muell. ... „ 290
iuniperinus, Wall. ... ... „ 294
Jussieuianus, Muell. v. 310, 320
khasicus, Muell. ... ... v. 324
Kirganelia, Ham. & Roxb. , 288
Kunstleri, *Hk. f.* ... ... „ 292
lævigatus, Muell. ... ... „ 319
lanceolarius, Muell. ... ... „ 308
Lawii, *Grah.* ... ... „ 290
leprocarpus, Wight ... ... „ 293
leptogynus, Bedd. ... ... „ 325
Leschenaultii, *Muell.* ... „ 296
leucophyllus, Str. & Wint. „ 328
leucopyrus, Koen. ... .. „ 329
linearis, Hb. Madr. ... ... „ 293
littoralis, Muell. ... ... „ 308
longiflorus, *Heyne* ... ... „ 302
longifolius, Jacq. ... ... „ 304
longipes, *Muell.* ... ... „ 287
Lonphali, Hb. Madr. ... „ 298
Lucena, Heyne ... ... „ 329
lucidus, Hort. ... ... „ 328
Macraei, *Muell.* ... ... „ 296
macrocalyx, *Muell.* ... ... „ 301
macropus, *Hk. f.* ... ... „ 287
maderaspatensis, *Linn.* ... „ 292
malabaricus, Muell. ... „ 319
malabaricus, Wight ... ... „ 293
marginatus, Heyne ... ... „ 296
microcarpus, Muell. ... ... „ 288
Miquelianus, Muell. ... ... „ 296
Missionis, *Hk. f.* . ... „ 297
Moonii, Muell. ... ... „ 325
mucronatus, Heyne ... ... „ 293
multiflorus, Willd. ... ... „ 288
multilocularis, Muell. ... „ 307
muricatus, Hb. Madr. ... „ 293
myrtifolius, *Moon* ... ... „ 296
myrtifolius, Wall. ... ... „ 288
Myrtillus, Ham. ... ... „ 335
nanogynus, Muell. .. ... „ 318
nanus, *Hk. f.* ... ... „ 298
Phyllanthus Vol. Page
Naviruli, Miq. ... ... v. 329
neilgherrensis, Muell. ... „ 316
nemoralis, Muell. ... ... „ 324
nemorum, *Russell* ... ... „ 291
nepalensis, Muell. ... ... , 322
nephradenius, Muell. ... „ 302
Niruri, *Linn.* ... ... „ 298
Niruri, Wall. ... ... v. 293, 299
nitidus, Muell. ... ... v. 311
obcordatus, Willd. ... ... „ 293
obliquus, Muell. ... ... , 311
obliquus, Wall. ... ... „ 303
oblongifolius, Dennst. ... „ 331
obscurus, Willd. ... ... „ 317
obtusus, Schrank ... ... „ 328
oreophilus, *Muell.* ... ... „ 303
? *oxyphyllus*, Miq. ... ... „ 292
pachyphyllus, Muell. ... „ 292
pallidifolius, Muell. ... „ 302
pallidus, Muell. ... ... „ 3 2
parvifolius, *Ham.* ... ... „ 294
patens, Miq. ... ... „ 296
patens, Roxb. ... ... „ 329
pectinatus, *Hk. f.* ... ... „ 290
Peltandra, Muell. ... ... „ 287
penangensis, Muell. ... ... „ 326
pendulus, *Roxb.* ... ... „ 298
pentandrus, Roxb. ... ... „ 288
Perrottetianus, Muell. ... „ 316
polyphyllus, *Willd.* ... ... „ 290
? *polyphyllus*, Dalz. & Gibs. „ 290
polyphyllus, Hb. Madr. „ 293
polyphyllus, Heyne ... ... „ 290
polyphyllus, Wight ... ... „ 298
pomaceus, Moon ... ... „ 329
pomiferus, *Hk. f.* ... ... , 289
prætervisus, Muell. ... ... „ 294
Prieurianus, Muell. ... ... „ 288
puberulus, Miq. ... ... „ 288
pubescens, Moon ... ... „ 325
pubescens, Wall. ... v. 289, 331
pulcher, *Wall.* ... ... v. 301
pycnocarpus, Muell. ... „ 316
quadrangularis, Willd. ... „ 335
racemosus, Heyne ... v. 290, 293
racemosus, Linn. ... ... v. 285
reclinatus, Roxb. ... ... „ 331
reticulatus, *Poir.* ... ... „ 288
retusus, Dennst. ... ... „ 329
retusus, Roxb. ... ... „ 328
rhamnifolius, Heyne ... „ 330
rhamnoides, Roxb. ... ... „ 335
rhamnoides, Willd. ... ... „ 330
Rheedii, *Wight* ... ... „ 293
Rœperianus, *Wall.* ... ... „ 294
rotundatus, Wight ... ... „ 328
rotundifolius, *Klein* ... „ 299

Phyllanthus Vol. Page
rotundifolius, Hb. Madr. v. 285, 299
Roxburghii, *Muell.* ... v. 300
scabrifolius, *Hk. f.* ... „ 299
sepiarius, Roxb. ... „ 330
sericeus, Muell. ... „ 326
sikkimensis, Muell. ... „ 304
silheticus, *Muell.* ... „ 327
simplex, *Retz.* ... „ 295
simplex, Roxb. ... „ 295
sinensis, Muell. ... „ 288
sphærogynus, Muell. ... „ 317
spinescens, Wall. ... „ 288
spinulosus, Heyne ... „ 290
? *stellatus*, Retz. ... „ 320
Stocksii, Muell. ... „ 305
strictus, Roxb. ... „ 332
suberosus, *Wight* ... „ 287
suffultus, Wall. ... „ 329
superbus, Muell. ... „ 323
symplocoides, Muell. ... „ 325
? *taxifolius*, D. Don ... v. 289, 290
tenellus, Wall. v. 297, 299, 302, 335
tetrandrus, Roxb. ... v. 291, 300
tetrandrus, Wall. ... v. 304
Thomsoni, Muell. ... „ 318
Thwaitesianus, *Muell.* „ 287
tinctorius, Vahl ... „ 331
tomentosus, Muell. ... „ 309
trinervius, Wall. ... „ 334
tristis, A. Juss. ... „ 330
turbinatus, Koen. ... „ 329
urinaria, *Linn.* ... „ 293
urinaria, Hb. Russ. ... „ 298
velutinus, Muell. ... „ 322
virgatus, Hb. Madr. ... „ 295
virosus, Roxb. ... „ 328
virosus, Wall. ... „ 288
virosus, Wight ... v. 330, 331
Vitis-idæa, Roxb. ... v. 330
Wallichianus, Muell. ... „ 315
Wightianus, Muell. ... „ 303
Wightianus, Muell. ... „ 328
Wightianus, Wall. ... „ 288
zeylanicus, Muell. ... v. 302, 311
Zollingeri, Muell. ... v. 302
Phyllobœa, *Benth.* ... iv. 364
amplexicaulis, *Benth.* ... „ 364
sp., Benth. ... „ 363
Phyllochlamys, *Bureau* ... v. 488
spinosa, *Bureau* ... „ 488
Wallichii, *King* ... „ 489
Phyllocyclus Helferi, Kurz iv. 106
Parishii, Kurz ... „ 105
Phyllodes Placentaria, Lour. vi. 259
Phyllodium pulchellum, Desv. ii. 162
vestitum, Benth. ... „ 162
Phyllostachys, *Sieb. & Zucc.* vii. 386

Phyllostachys Vol. Page
bambusoides, *Sieb. & Zucc.* vii. 386
Mannii, *Gamble* ... „ 386
megastachya, Steud. ... „ 386
Physalis, *Linn.* ... iv. 238
angulata, Linn. ... „ 238
angulata, Wall. ... „ 238
arborescens, Thunb. ... „ 239
daturæfolia, Lamk. ... „ 240
divaricata, D. Don ... „ 238
edulis, Sims ... „ 238
flexuosa, Linn. ... „ 239
Hermanni, Dunal ... „ 238
minima, *Linn.* ... „ 238
parviflora, Br. ... „ 238
peruviana, *Linn.* ... „ 238
Pseudo angulata, Bl. ... „ 238
pubescens, D. Don ... „ 238
pubescens, Wight ... „ 238
Rothiana, R. & S. ... „ 238
somnifera, Link ... „ 239
stramonifolia, Wall. ... „ 243
tomentosa, Thunb. ... „ 239
villosa, Roth ... „ 238
Physichilus Serpyllum, Nees iv. 406
sp., Hk. f. & T. ... „ 407
Physochlaina, *G. Don* ... iv. 244
grandiflora, Hk. f. ... „ 244
præalta, *Hk. f.* ... „ 244
Physorhynchus, *Hook.* ... i. 165
brahuicus, *Hook.* ... „ 165
Chamærapistrum, Boiss. ... „ 165
Physostelma, *Wight* ... iv. 62
campanulatum, Dcne. ... „ 62
Wallichii, *Wight* ... „ 62
Physurus, *Rich.* ... vi. 94, 179
Blumei, *Lindl.* ... vi 94
hirsutus, *Lindl.* ... „ 94
humilis, Bl. ... „ 94
? *viridiflorus*, Lindl. ... „ 93
Phyteuma, *Linn.* ... iii. 438
begonifolium, Roxb. ... „ 437
campanuloides, Bieb. ... „ 442
Thomsonii, *Clarke* ... „ 438
Phytocrene, *Wall.* ... i. 591
bracteata, *Wall.* ... „ 592
calicarpa, Griff. ... „ 591
gigantea, *Wall.* ... „ 591
macrocarpa, Griff. ... „ 592
oblonga, *Wall.* ... „ 592
palmata, *Wall.* ... „ 592
stylocarpa, Griff. ... „ 592
sp., Wight ... „ 593
PHYTOCRENEÆ ... i. 573
Phytolacca, *Linn.* ... v. 21
acinosa, *Roxb.* ... „ 21
decandra, Linn. ... „ 21
Kaempferi, A. Gray ... „ 21

Vol. Page
PHYTOLACCACEÆ ... ... v. 21
Picea, *Link* ... ... v. 653
Herbertiana, Madd. ... ... „ 655
Khutrow, Carr ... ... „ 653
Morinda, *Link* ... ... „ 653
Naphta, Knight ... ... „ 655
Pindrow, Loud. ... ... „ 655
Webbiana, Loud. ... ... „ 654
PICRAMNIEÆ ... ... i. 517
Picrasma, *Bl.* ... ... i. 520
andamanica, *Kurz* ... ... „ 520
javanica, *Bl.* ... ... „ 520
nepalensis, *Benn.* ... ... „ 520
quassioides, *Benn.* . ... „ 520
Picridium, *Desf.* ... ... iii. 413
orientale, DC. ... ... „ 413
tingitanum, *Desf.* ... ... „ 413
Picris, *Linn.* ... ... iii. 392
hamulosa, Wall. ... ... „ 393
hieracioides, *Linn.* ... ... „ 393
strigosa, Wall. ... ... „ 393
Picrorhiza, *Royle* ... ... iv. 290
Kurrooa, *Benth.* ... ... „ 290
Piddingtonia montana, Miq. iii. 423
Nummularia, DC. ... ... „ 422
patens, Miq. ... ... „ 423
Pierardia courtallensis, Wight v. 368
dulcis, Wall. .. .. „ 372
flaccida, Wall. ... ... „ 371
macrophylla, Muell. ... „ 369
Motleyana, Muell. ... ... „ 371
parviflora, Muell. ... ... „ 369
sapida, Roxb. ... ... „ 372
sp., Wall. ... ... v. 368, 375, 376
Pieris, *D. Don* ... ... iii. 460
formosa, *D. Don* ... ... „ 461
Griffithiana, Hk. f. ... ... „ 460
lanceolata, D. Don ... ... „ 461
ovalifolia, *D. Don* ... ... „ 460
villosa, *Hk. f.* ... ... „ 461
Pierotia lucida, Bl. ... ... i. 416
Pilea, *Lindl.* ... ... v. 551
angulata, Bl. ... ... „ 555
anisophylla, *Wedd.* ... ... „ 552
approximata, *Clarke* ... „ 553
bracteosa, *Wedd.* ... ... „ 555
Clarkei, *Hk. f.* ... ... „ 553
cordifolia, *Hk. f.* ... ... „ 558
elongata, Miq. ... .. „ 557
fruticosa, *Hk. f.* .. ... „ 558
glaberrima, Bl. ... ... „ 553
Goglado, Bl. ... . „ 553
Goglado, Wedd. ... ... „ 556
Griffithii, *Bl.* ... ... „ 558
Hookeriana, *Wedd.* ... ... „ 557
Hugelii, Bl. ... ... „ 554
hygrophila, Bl. ... ... „ 558

Pilea Vol. Page
insolens, *Wedd.* ... ... v. 552
javanica, Wedd. ... ... „ 561
lancifolia, *Hk. f.* ... ... „ 553
melastomoides, Bl. ... ... „ 557
melastomoides, Wedd. ... „ 557
miconiæfolia, Miq. ... ... „ 553
microphylla, Liebm. ... „ 551
muscosa, Lindl.... ... ... „ 551
obliqua, *Hk. f.* ... ... „ 558
oreophila, Bl. ... ... „ 557
? oxyodon, Wedd. ... ... „ 555
pachycarpa, *Wedd.* ... ... „ 557
peduncularis, Sm. *vide* Urtica ... ... „ 557
pellucida, Bl. ... ... „ 557
peploides, *Hook. & Arn.* „ 554
petiolaris, Wedd. ... ... „ 555
producta, Bl. ... ... „ 558
pygmæa, Miq. ... . „ 554
radicans, Wight ... ... „ 554
scripta, *Wedd.* .. .. „ 556
smilacifolia, *Wedd.* ... ... „ 553
stipulosa, *Miq.* ... ... „ 555
Symmeria, *Wedd.* ... ... „ 554
ternifolia, *Wedd.* ... ... „ 552
trinervia, *Wight* ... ... „ 557
umbrosa, *Wedd.* ... ... „ 556
Wightii, *Wedd.* ... ... „ 554
Pileostegia, *Hk. f. & T.* ... ii. 405
viburnoides, *Hk. f. & T.* „ 405
Pileostigma malabarica, Benth. ii. 277
racemosa, Benth. ... ... „ 276
Piletocarpus protensus, Hassk. vi. 383
Pilogyne lucida, Naud. ... ii. 625
Pilotrichum **vide** *Ptilotrichum* ... ... i. 141
Pimelandra, *A. DC.* ... ... iii. 530
? erecta, *Clarke* ... ... „ 531
eugeniæfolia, *Hk. f.* ... ... „ 530
Griffithii, *Clarke* ... ... „ 531
Teysmanniana, Hk. f. ... „ 531
Wallichii, *A. DC.* ... ... „ 531
Pimeleodendron, *Hassk.* ... v. 468
Griffithianus, *Benth.* ... „ 468
Pimenta acris, Wight ... ... ii. 462
Pimpinella, *Linn.* ... ... ii. 684
achilleifolia, *Clarke*... ... „ 684
acronemæfolia, *Clarke* ... „ 686
acuminata, *Clarke* ... ... „ 686
adscendens, *Dalz.* ... ... „ 689
anethifolia, D. Don ... „ 683
bella, *Clarke* ... ... „ 686
cæspitosa, *Benth.* ... ... „ 698
Candolleana, *W. & A.* ... „ 687
crinitam, Boiss. ... ... „ 719
diversifolia, *DC.* ... ... „ 688
hastata, *Clarke* ... ... „ 687

Pimpinella Vol. Page
Heyneana, *Wall.* ... ... ii. 684
Hookeri, *Clarke* ... ... „ 686
involucrata, Miq. ... ... „ 697
? *involucrata*, W. & A. ... „ 682
javana, DC. ... ... „ 687
lateriflora, *Dalz. & Gibs.* „ 689
Leschenaultii, *DC.* ... ... „ 687
monoica, *Dalz.* ... ... „ 687
nervosa, *Clarke* ... ... „ 684
Parishiana, *Kurz* ... ... „ 688
pubescens, Wall. ... ... „ 688
rhodantha, Boiss. ... ... „ 685
Saxifraga, *Linn.* ... ... „ 685
sikkimensis, *Clarke* ... ... „ 685
sikkimensis, Benth. ... ... „ 699
sinica, Hance ... ... „ 688
Stracheyi, *Clarke* ... ... „ 688
tenera, *Benth.* ... ... „ 686
tomentosa, *Dalz.* ... ... „ 689
trifoliata, Wall. ... ... „ 688
Wallichii, *Clarke* ... ... „ 685
sp., Hk. f. & T. ... ii. 687, 688, 689
Pinalia alba, Ham. ... ... v. 791
Pinanga, *Bl.* ... ... vi. 406
bicolor, Bl. vide *bifida* ... „ 408
bifida, lapsu *bicolor*, Bl. ... „ 408
coronata, Kurz. ... ... „ 409
costata, Bl. ... ... „ 409
Dicksonii, *Bl.* ... ... „ 409
disticha, *Bl.* ... ... „ 408
gracilis, *Bl.* ... ... „ 407
Griffithii, *Becc.* ... ... „ 407
hexasticha, *Scheff.* ... ... „ 406
Hookeriana, *Becc.* ... ... „ 410
hymenospatha, *Hk. f.* ... „ 411
Kuhlii, *Bl.* ... ... „ 409
malaiana, *Scheff.* ... ... „ 410
Manii, *Becc.* ... ... „ 409
Nenga, Bl. ... ... „ 412
paradoxa, *Scheff.* ... ... „ 411
patula, *Bl.* ... ... „ 411
pectinata, *Becc.* ... ... „ 410
perakensis, *Becc.* ... ... „ 410
polymorpha, *Becc.* ... ... „ 407
robusta, *Becc.* ... ... „ 408
Scortechini, *Becc.* ... ... „ 408
subruminata, *Becc.* ... ... „ 408
Pinguicula, *Linn.* ... ... iv. 335
alpina, *Linn.* ... ... „ 335
brachyloba, Led. ... ... „ 335
flavescens, Flörke ... ... „ 335
Pinus, *Linn.* ... ... v. 651
Brunoniana, Wall. ... ... „ 654
decidua, Wall. ... ... „ 654
Deodara, Roxb. ... ... „ 653
dumosa, D. Don ... ... „ 654
excelsa, *Wall.* ... ... „ 651

Pinus Vol. Page
Finlaysoniana, Wall. ... v. 652
Gerardiana, *Wall.* ... ... „ 652
Griffithii, M'Clell. ... ... „ 651
Griffithii, Parl. ... ... „ 655
Kasya, Kurz ... ... v. 651, 652
Keseya, Royle ... ... v. 652
Khasya, *Royle* ... ... „ 652
khasyana, Griff. ... ... „ 652
Kutrow, Royle ... ... „ 653
Latteri, Madd. ... ... „ 651
Latteri, Mason ... ... „ 653
longifolia, *Roxb.* ... ... „ 652
Merkusii, *Jungh.* ... ... „ 652
mitis, Gordon ... ... „ 651
Naphtah, Antoine ... ... „ 655
nepalensis, Forbes ... ... „ 651
nepalensis, Royle ... ... „ 651
pendula, Griff. ... ... „ 651
Peuce, Griseb. ... ... „ 651
Pinaster, Soland. ... ... „ 651
Pindrow, Royle ... ... „ 655
Royleana, Jameson ... ... „ 651
sinensis, Endl. ... ... „ 651
Smithiana, Lamb. ... ... „ 653
spectabilis, Lamb. ... ... „ 654
striata, Ham. ... ... „ 654
sumatrana, Jungh. ... ... „ 652
Webbiana, Wall. ... ... „ 654
Piper, *Linn.* ... ... v. 78
acre, Bl. ... ... „ 92
Amalago, Linn. ... ... „ 95
anisotis, *Hk. f.* ... ... „ 86
araneum (see avanum) *Wall.*
arborescens, Roxb. ... ... v. 96
arborescens, Miq. ... ... „ 89
arborescens, Roxb. ... ... „ 74
arborescens, Thw. ... ... v. 82, 94
arborescens, Wall. ... ... v. 85
arcuatum, Bl. ... ... „ 96
arcuatum, Thw. ... ... v. 82, 91
argyropyllum, *Miq.* ... ... v. 93
argyrophyllum, Thw. ... „ 94
Arnottianum, Cas. DC. ... „ 84
attenuatum, *Ham.* ... ... „ 92
attenuatum, Cas. DC. ... „ 96
aurantiacum, *Wall.* ... „ 86
aurantiacum, Wall. ... ... „ 92
auriculatum, Bl. ... ... „ 85
avanum (*araneum*) *Wall.* „ 96
baccatum, Cas. DC. ... ... „ 90
bantamense, Cas. DC. ... „ 82
Betle, *Linn.* ... ... „ 85
? *Betle*, Wall. ... ... v. 84, 88
birmanicum, Cas. DC. ... v. 88
boehmeriæfolium, *Wall.* „ 85
brachystachyum, *Wall.* ... „ 87
bracystachyum, Wall. ... „ 83

Piper — Vol. Page
callosum, Opiz. ... ... v. 84
caninum, *Bl.* ... ... „ 82
ceylanicum, Cas. DC. ... „ 91
Chaba, *Hunter* ... ... „ 83
Chavya, Ham. ... ... „ 85
Chuvya, Hunter ? ... ... „ 87
clypeatum, Wall. ... v. 96, 537
coriaceum, Vahl ... ... v. 96
Cubeba, Miq. ... ... „ 96
Cubeba, Vahl ... ... „ 82
Cubeba, Wall. ... ... „ 82
diffusum, Vahl ... ... „ 96
exasperatum, Vahl .. ... „ 96
exiguum, Bl. ... ... „ 97
fallax, Vahl ... ... „ 96
galeatum, *Cas. DC.* ... .. „ 80
glabrum, Roxb. ... ... „ 84
glandulosum, Opiz. ... ... „ 85
Griffithii, *Cas. DC.* ... ... „ 81
Guigual, D. Don ... ... „ 87
Hamiltoni, *Cas. DC.* ... „ 88
Hapnium, *Ham.* ... ... „ 86
Hookeri, *Miq.* ... ... „ 88
hyalinum, Wall. ... ... „ 97
Hymenophyllum, *Miq.* ... „ 93
indicum, Miq. ... ... „ 95
insulare, Cas. DC. ... ... „ 91
javanicum, Cas. DC. ... „ 82
khasianum, *Cas. DC.* ... „ 89
læve, Vahl ... ... „ 96
lanatum, Roxb. ... ... „ 82
lanatum, Wight ... ... „ 93
lanceolatum, Roxb. ... ... v. 82, 85
latifolium, Hunter ... ... v. 83
leptonema, *Hk. f.* ... ... „ 91
leptostachyum, *Wall.* ... „ 95
leptostachyum, A. Rich. ... „ 95
Lonchites, *R. & S.* ... ... „ 90
Lonchites, Wall. v. 82, 85, 88, 92
longum, *Linn.* ... ... v. 83
longum, Bl. ... ... „ 84
longum, Miq. ... ... „ 96
macrostachya, Miq. (lapsu
  Cubeba) .. .. „ 85
Maingayi, *Hk. f.* ... ... „ 80
malabarense, Cas. DC. ... „ 90
Malamiri, Roxb. ... ... „ 84
Malamiris, Linn. ... ... „ 96
Malamiris, Roxb. ... ... „ 92
Malamiris, Wall. ... ... v. 93, 94
manillanum, Miq. ... ... v. 96
maritimum, Bl. ... ... „ 84
miniatum, *Bl.* ... ... „ 85
moluccanum, Spreng. ... „ 85
Mullesua, D. Don ... ... „ 87
muricatum, *Bl.* ... ... „ 82
nepalense, *Miq.* .. ... „ 89

Piper — Vol. Page
nepalense, Wight ... ... v. 94
nigrum, *Linn.* ... ... „ 90
nigrum, Wall. ... v. 86, 89, 94, 96
nilghirianum, Cas. DC. ... v. 93
oblongum, Wall. ... „ 99
obtusissimum, Miq. ... ... „ 96
officinanum, Cas. DC. ... „ 84
ovalifolium, Wall. ... ... v. 97, 98
pachyphyllum, *Hk. f.* ... v. 80
pedicellosum, *Wall.* ... „ 81
pedicellosum, Wall. ... ... „ 81
peepuloides, *Roxb.* ... ... „ 83
peepuloides, Wall. ... v. 84, 85, 89
penangense, *Cas. DC.* ... v. 88
petiolatum, *Hk. f.* ... ... „ 84
plantagineum, Ham. ... „ 88
porphyrophyllum, N.E. Br. „ 96
portulacoides, Lamk. ... „ 98
pothiforme, *Wall.* ... ... „ 86
pothoides, Wall. ... v. 86, 96
pusillum, Bl. ... ... v. 99
retrofractum, Vahl ... „ 96
rhytidocarpum, *Hk. f.* ... „ 92
ribesioides, *Wall.* ... ... „ 81
rostratum, *Roxb.* ... ... „ 87
sarmentosum, Miq. ... ... „ 96
sarmentosum, Wall. ... ... „ 83
saxatile, Wall. ... ... „ 99
Schizonephros, *Cas. DC.* ... „ 79
Schmidtii, *Hk. f.* ... ... v. 89, 96
Siriboa, Heyne ... ... v. 86
Siriboa, Linn. ... ... „ 85
? *Sirium*, Cas. DC. ... ... „ 92
stylosum, Miq. ... ... „ 88
subpeltatum, *Willd.* ... „ 95
Suipiqua, Ham. ... ... „ 96
sumatranum, *Cas. DC.* ... „ 81
sylvaticum, *Roxb.* ... ... „ 84
sylvestre, *Lamk.* ... ... „ 93
sylvestre, Lour. ... ... „ 96
syringæfolium, Vahl ... „ 96
thermale, *Vahl* ... ... „ 96
Thomsoni, *Hk. f.* ... ... „ 87
Thwaitesii, Cas. DC. ... „ 82
trichostachyon, *Cas. DC.* „ 80
trifolium, Willd. ... ... „ 98
trineuron, *Miq.* ... ... „ 91
trioicum, ? Hook. ... ... „ 92
trioicum, Roxb. ... ... „ 90
vasculosum, Wall. ... ... „ 87
? *venustum*, Wall. ... ... „ 96
Walkeri, Miq. ... ... „ 94
Wightii, *Miq.* ... ... „ 94
Wightii, Miq. ... ... v. 93, 94
zeylanicum, *Miq.* ... ... v. 91
Zuccarinii, Cas. DC. ... „ 96
sp., Hk. f. & T. ... ... „ 89

Vol. Page
PIPERACEÆ ... v. 78
PIPEREÆ ... v. 78
Piptadenia, *Benth.* ... ii. 289
  oudhensis, *Brand.* ... „ 289
Piptanthus, *D. Don* ... ii. 62
  nepalensis, *D. Don* ... „ 62
Piptatherum æquiglume, Munro ... vii. 234
  annulatum, Raddi ... „ 21
  confine, Schult. ... „ 21
  holciforme, Hk. f. & T. ... „ 234
  laterale, Munro ... „ 234
  molinioides, Boiss. ... „ 234
  punctatum, Beauv. ... „ 21
  soongaricum, Duthie ... „ 234
  soongaricum, Munro ... „ 234
  strictum, Munro ... „ 234
  sp., Str. & Wint. ... „ 234
Piptoclaina malabarica, G. Don ... iv. 149
  supina, G. Don ... „ 149
Piptostylis indica, Dalz. ... i. 505
Pipturus, *Wedd.* ... v. 589
  incanus, Wedd. ... „ 589
  mollissimus, *Wedd.* ... „ 589
  velutinus, *Wedd.* ... „ 589
Pircunia Latbenia, Moq. ... v. 21
Pirigara (Pirigarda) valida, Bl. ... ii. 511
Pisonia, *Linn.* ... iv. 710
  aculeata, *Linn.* ... „ 711
  alba, *Spanoghe* ... „ 711
  excelsa, *Bl.* ... „ 711
  Georgina, Wall. ... „ 711
  ? *inermis*, Forst. ... „ 711
  macrocarpa, Presl ... „ 711
  ? *malabarica*, Poir. ... „ 711
  ? *mitis*, Linn. ... „ 711
  morindæfolia, Br. ... „ 711
  racemosa, Wall. ... „ 711
  umbellifera, Seem. ... „ 711
  villosa, Poir. ... „ 711
PISONIEÆ ... iv. 708
Pistacia, *Linn.* ... ii. 13
  integerrima, *Stew.* ... „ 13
  Vitex, Linn. ... iv. 585
Pistia, *Linn.* ... vi. 496
  Stratiotes, *Linn.* ... „ 497
Pisum arvense, Linn. ... ii. 181
  sativum, Linn. ... „ 181
Pithecolobium, *Mart.* ... ii. 302
  affine, *Baker* ... „ 304
  anamallayanum, Bedd. ... „ 305
  angulatum, *Benth.* ... „ 306
  bigeminum, *Benth.* ... „ 303
  bubalinum, *Benth.* ... „ 304
  Clypearia, *Benth.* ... „ 305

Pithecolobium Vol. Page
  confertum, *Benth.* ... ii. 304
  contortum, *Mart.* ... „ 305
  dulce, *Benth.* ... „ 302
  falcifolium, Hassk. ... „ 306
  fasciculatum, *Benth.* ... „ 304
  geminatum, *Benth.* ... „ 303
  lobatum, *Benth.* ... „ 305
  microcarpum, *Benth.* ... „ 304
  montanum, *Benth.* ... „ 306
  nitidum, Benth. ... „ 303
  subcoriaceum, *Thw.* ... „ 305
  umbellatum, *Benth.* ... „ 303
PITTOSPOREÆ ... i. 197
Pittosporum, *Banks* ... i. 198
  abyssinicum, Hochst. ... „ 199
  ceylanicum, *Wight* ... „ 199
  dasycaulon, *Miq.* ... „ 199
  ? *densiflorum*, Putterl. ... „ 199
  eriocarpum, *Royle* ... „ 199
  ferrugineum, *Ait.* ... „ 199
  ferrugineum, Putterl. ... „ 200
  floribundum, *W. & A.* ... i. 199, 618
  glabratum, *Lindl.* ... i. 198
  humile, *Hk. f. & T.* ... „ 198
  Mannii, Hk. f. ... „ 199
  nilghirense, *W. & A* ... „ 198
  Rumphii, Putterl. ... „ 200
  Senacia, Putterl. ... „ 199
  tetraspermum, *W. & A.* ... „ 198
Pituranthos, *Viv.* ... ii. 679
  nuda, *Benth.* ... „ 680
  Thomsoni, *Clarke* ... „ 680
Pityranthe, *Thw.* ... i. 382
  verrucosa, *Thw.* ... „ 382
Pladera decussata, Roxb. ... iv. 104
  fastigiata, Arn. ... „ 100
  perfoliata, Roxb. ... „ 104
  pusilla, Roxb. ... „ 100
  pusilla, Thw. ... „ 100
  sessiliflora, Roxb. ... „ 104
  ? *virgata*, Griff. ... „ 105
  virgata, Roxb. ... „ 103
Plagiolytrum calycinum, Nees ... vii. 287
  filiforme, Nees ... „ 288
  unidentatum, Nees ... „ 288
Plagiopteron, *Griff.* ... i. 399
  fragrans, *Griff.* ... „ 399
Plagiotaxis Chickrassia, Wall. i. 568
  grandiflora, Wall. ... „ 552
  velutina, Wall. ... „ 568
Planchonia, *Bl.* ... ii. 511
  littoralis, *Van Houtte* ... „ 511
  littoralis, Miers ... „ 511
PLANTAGINEÆ ... iv. 705
Plantago, *Linn.* ... iv. 705
  amplexicaulis, *Cav.* ... „ 706

Plantago Vol. Page
  arenaria, Dcne. ... ... iv. 707
  argentea, Desf. ... ... „ 707
  asiatica, Linn. ... ... „ 705
  attenuata, Wall. ... ... „ 706
  Bauphula, Edgew. ... ... „ 706
  brachyphylla, *Edgew.* ... „ 706
  ciliata, *Desf.* ... ... „ 707
  decumbens, Forsk. ... ... „ 707
  eriantha, Dcne. ... ... „ 707
  erosa, Wall. ... ... „ 705
  gentianoides, Dcne. ... ... „ 706
  indica, Linn. ... ... „ 708
  Ispaghul, Roxb ... ... „ 707
  lagopoides, Desf. ... ... „ 706
  lanata, Wall. ... ... „ 707
  lanceolata, *Linn.* ... ... „ 706
  longiscapa, Jacq. ... ... „ 705
  major, *Linn.* ... ... „ 705
  ovata, *Forsk.* ... ... „ 707
  Psyllium, *Linn.* ... ... „ 707
  pumila, *Willd.* ... ... „ 707
  remotiflora, Stocks ... ... „ 706
  salina, Dcne. ... ... „ 706
  Stocksii, *Boiss.* ... ... „ 706
  stricta, Schousb. ... ... „ 708
  tibetica, *Hk. f. & T.* ... „ 706
  sp., Griff. ... ... „ 708
PLATANACEÆ ... ... v. 594
Platanocarpum cordatum,
    Korth. ... ... iii. 22
  subtitum, Korth. ... ... „ 22
Platanthera acuifera, Lindl. vi. 147
  acuminata, Lindl. ... ... „ 153
  affinis, Wight ... ... „ 164
  arcuata, Lindl. ... ... „ 155
  brachyphylla, Lindl. ... „ 151
  canarensis, Lindl. ... vi. 152, 197
  candida, Lindl. ... ... vi. 142
  Championi, Lindl. ... ... „ 164
  clavigera, Lindl. ... ... „ 153
  commelinifolia, Lindl. ... „ 143
  constricta, Lindl. ... ... „ 161
  cordifolia, Lindl. ... ... „ 167
  cubitalis, Lindl. ... ... „ 157
  densa, Lindl. ... ... „ 153
  galeandra, Rchb. f. ... ... „ 163
  geniculata, Lindl. ... ... „ 138
  gigantea, Lindl. ... ... „ 137
  Heyneana, Lindl. ... ... „ 148
  jantha, Wight ... ... „ 164
  latilabris, Lindl. ... ... „ 153
  linifolia, Lindl. ... ... „ 151
  longibracteata, Lindl. ... „ 166
  lucida, Lindl. ... ... „ 133
  lutea, Wight ... ... „ 164
  marginata, Lindl. ... ... „ 150
  marginata, Wall. ... ... „ 135
Platanthera Vol. Page
  obcordata, Lindl. ... ... vi. 163
  Orchidis, Lindl. ... ... „ 142
  Orchidis, Wall. ... ... „ 153
  rhynchocarpa, Thw. ... „ 145
  robusta, Lindl. ... ... „ 137
  rostrata, Lindl. ... vi. 146, 147
  Schischmareffiana, Lindl. vi. 130
  stenostachya, Lindl. ... „ 156
  Susannæ, Lindl. ... ... „ 137
  uniflora, Lindl. ... .. „ 166
Platanus, *Linn.* ... ... v. 594
  occidentalis, Linn. ... ... „ 594
  orientalis, *Linn.* ... ... „ 594
  vulgaris, Spach ... ... „ 594
Platea axillaris, Thw. ... i. 586
  Griffithiana, Miers ... ... „ 590
  Lobbiana, Miers ... ... „ 590
  Wightiana, Miers ... ... „ 586
Platostoma ... ... iv. 611
Platunum rubrum, Juss. ... iv. 596
Platychæte glaucescens, Boiss. iii. 300
  villosa, Boiss. ... ... „ 300
Platyclinis, *Benth.* ... ... v. 708
  gracilis, *Hk. f.* ... v. 708, vi. 183
  Kingii, *Hk. f.* ... „ 708, „ 183
Platynema laurifolium,
    W. & A. ... ... i. 418
Platystemma, *Wall.* ... ... iv. 361
  majus, Wall. ... ... „ 361
  violoides, *Wall.* ... ... „ 361
Platystigma, *Br.* ... ... v. 381
  myristiceum, *Br.* ... ... „ 381
Platystoma, *Beauv.* ... ... iv. 611
  africanum, Beauv. ... ... „ 611
  flaccidum, *Benth.* ... ... „ 611
Plecospermum, *Trecul* ... v. 491
  andamanicum, *King* ... „ 491
  cuneifolium, Thw. ... ... „ 538
  spinosum, *Trecul* ... .. „ 491
Plectocomia, *Mart.* ... ... vi. 477
  assamica, *Griff.* ... ... „ 479
  assamica, Hk. ... ... „ 478
  elongata, *Mart.* ... ... „ 479
  elongata, Griff. ... ... „ 478
  geminiflora, H. Wendl. ... „ 479
  Griffithii, *Becc.* ... ... „ 478
  himalayana, *Griff.* ... ... „ 478
  khasyana, *Griff.* ... ... „ 478
  macrostachya, *Kurz* ... „ 478
  montana, Hk. f. & T. ... „ 478
Plectocomiopsis, *Becc.* ... vi. 479
  geminiflorus, *Becc.* ... ... „ 479
  paradoxus, *Becc.* ... ... „ 480
  Wrayii, *Becc.* ... ... „ 480
Plectranthus, *L'Herit.* ... iv. 616
  amœnus, Wall. ... ... „ 615
  aromaticus, Roxb. ... ... „ 625

Plectranthus Vol. Page
asper, Spreng. ... ... iv. 625
barbatus, Andr. ... ... „ 625
Barrelieri, Spreng. „ 608
? *bullatus*, Benth. ... ... „ 619
caninus, Roth ... ... „ 625
capillipes, *Benth.* ... ... „ 619
carnosus, Sm. ... ... „ 627
Coetsa, *Ham.* ... ... „ 619
Coetsa, Thw. ... ... „ 620
coleoides, *Benth* ... ... „ 622
coloratus, D. Don ... ... „ 610
comosus, Sims ... ... „ 625
Concan, Hk. f. & T. ... „ 618
cordifolius, D. Don ... ... „ 621
crenulatus, *Hk. f.* ... ... , 623
divaricatus, Weinm. ... „ 621
dubius, Spreng. ... ... „ 627
Forskohlii, Willd. ... ... „ 625
fruticosus, *Wight* ... ... „ 623
Gardneri, Thw. ... ... ,' 622
Gerardianus, *Benth.* ... „ 617
graciliflora, Benth. ... „ 618
Griffithii, *Hk. f.* ... ... „ 623
? **Helferi**, *Hk. f.* ... ... „ 623
hians, Benth. ... ... „ 617
hispidus, *Benth.* ... ... „ 618
Hookeri, Clarke ... ... „ 620
incanus, *Link* ... . „ 621
indicus, Spreng. ... ... „ 609
longitubus, Miq. ... „ 616
Macraei, Benth. ... ... „ 620
macranthus, *Hk. f.* ... ... „ 616
Maddeni, *Benth.* ... ... „ 620
melissoides, *Benth.* ... ... „ 620
menthoides, *Benth.* ... „ 620
micranthus, Spreng. ... „ 612
mollis, Spreng. ... ... „ 621
mollissimus, Wall. ... ... „ 615
monadelphus, Heyne ... „ 624
? **montanus**, *Benth.* ... „ 624
montanus, Wight ... ... „ 617
mysorensis, Heyne ... ... „ 625
nepetæfolius, *Benth.* ... „ 619
nigrescens, *Benth.* ... ... „ 617
nilghiricus, *Benth.* ... ... „ 619
nudiflorus, Willd. ... ... „ 626
oblongifolius, Wall. ... ... „ 617
Parishii, *Hk. f.* ... ... „ 622
parviflorus, Br. ... ... „ 612
Patchouli, *Clarke* ... ... „ 624
pulneyensis, *Hk. f.* ... „ 617
repens, Wall. ... ... „ 619
rivularis, *Wight* ... ... „ 617
rotundifolius, *Spreng.* ... „ 624
rubicundus, D. Don ... „ 615
rugosus, *Wall.* ... ... „ 620
scabrellus, Benth. ... ... „ 617

Plectranthus Vol. Page
scrophularoides, *Wall.* ... iv. 616
scutellarioides, Br. ... ... „ 626
secundus, Roxb. ... ... „ 621
Stocksii, *Hk. f.* ... ... „ 618
Stracheyi, *Benth.* ... ... „ 618
striatus, *Benth.* ... ... „ 618
striatus, Hk. f. & T. ... „ 618
striatus, Wight ... ... „ 617
strobiliferus, Roxb. ... „ 627
subincisus, *Benth.* ... ... „ 621
ternifolius, *D. Don* ... „ 621
? *thymiflorus*, Spreng. ... „ 614
tristis, Spreng. ... ... „ 613
tuberosus, Bl. ... ... „ 625
urticifolius, *Hk. f.* ... ... „ 622
virgatus, D. Don ... ... „ 615
Walkeri, *Arn.* ... ... „ 617
Wightii, *Benth.* ... ... „ 619
Wightii, Grah. ... ... „ 618
zeylanicus, *Benth.* ... ... „ 622
sp., Griff. ... ... „ 655
sp., Hk. f. & T. ... ... „ 620
Plectronia, Linn. ... ... iii. 131
didyma, Brand. ... ... „ 132
didyma, Kurz ... ... „ 132
glabra, DC. ... ... „ 133
neilgherrensis, Bedd. ... „ 133
Plectronia, Lour. ... ... ii. 726
chinensis, Lour. ... ... „ 726
Pleiogyne cardiosperma, Edgew. ... ... iii. 316
Pleione birmanica, Rchb. f. (vide *Cœlogyne*) ... ... v. 840
? *diphylla*, Lindl. ... ... „ 841
humilis, D. Don ... ... „ 841
lagenaria, Lindl. ... ... „ 841
maculata, Lindl. ... ... „ 841
præcox, D. Don ... ... „ 840
Wallichiana, Jard. Fleur. „ 840
Wallichii, Lindl. ... ... „ 840
Pleotheca bifida, Wall. ... iii. 76
cylindrica, Wall. ... ... „ 76
PLERANDREÆ ... ... ii. 721
Plesmonium, *Schott.* ... ... vi. 518
dubium, Schott... ... ... „ 519
margaritiferum, *Schott.* ... „ 518
Pleuranthesis, Benth. ... . . vi. 248
Pleurogyne, *Eschsch.* ... ... iv. 119
brachyanthera, *Clarke* ... „ 120
carinata, Edgew. ... ... „ 120
carinthiaca, *Griseb.* ... ... „ 120
himalayensis, Klotz. ... „ 120
? **minor**, *Benth.* ... ... „ 120
spathulata, *A. Kerner* ... „ 120
Stelleriana, G. Don ... ... „ 120
Thomsoni, *Clarke* ... ... „ 120
sp., Hk. f. & T. ... ... „ 120

Vol. Page
Pleuroplitis caucasica, Rupr. ... vii. 146
centro-asiatica, Griseb. ... „ 146
ciliata, Schmidt ... „ 146
lancifolia, Regel ... „ 147
Langsdorffiana, Trin. ... „ 146
major, Regel ... „ 146
microphylla, Regel ... „ 147
plumbea, Steud. ... „ 146
Quartiniana, Regel ... „ 146
Schimperi, Regel ... „ 147
violacea, Steud. ... „ 146
Pleurospermum, *Hoffm.* ... ii. 702
angelicoides, *Benth.* ... „ 703
apiolens, *Clarke* ... „ 705
Benthami, *Clarke* ... „ 703
Brunonis, *Benth.* ... „ 706
Candollii, *Benth.* ... „ 703
cicutarium, Lindl. ... „ 700
densiflorum, *Benth.* ... „ 706
dentatum, *Benth.* ... „ 704
Govanianum, *Benth.* ... „ 702
Hookeri, *Clarke* ... „ 705
pumilum, *Benth.* ... „ 704
? rotundatum, *Benth.* ... „ 703
sikkimense, *Clarke* ... „ 702
stellatum, *Benth.* (see Errata) „ 704
stylosum, *Clarke* ... „ 704
Pleurostylia, *Wight* ... i. 617
Heynei, W. & A. ... „ 617
Wightii, *W. & A.* ... „ 617
Pleurothallis purpurea, D. Don v. 760
Plinia pedunculata, Linn. f. ii. 505
rubra, Linn. ... „ 505
Plocoglottis, *Bl.* ... vi. 21, 177, 178
acuminata, *Bl.* ... vi. 21
javanica, *Bl.* ... „ 22
Plocostemma, Bl. ... iv. 53
Ploiarum elegans, Korth. ... i. 294
Pluchea, *Cass* ... iii. 271
arguta, *Boiss.* ... „ 273
eupatorioides, Kurz ... „ 273
foliolosa, DC. ... „ 272
frutescens, Benth. ... „ 273
indica, *Less.* ... „ 272
lanceolata, *Oliv.* ... „ 272
lanuginosa, Clarke ... „ 266
linearifolia, *Clarke* ... „ 273
ovalis, *DC.* ... „ 272
tomentosa, *DC.* ... „ 272
Wallichiana, *DC.* ... „ 272
Plukenetia, *Linn.* ... v. 464
corniculata, *Sm.* ... „ 464
Plumbageæ, ... iii. 478
PLUMBAGINEÆ ... iii. 478
Plumbago, *Linn.* ... iii. 480
auriculata, Bl. ... „ 480
coccinea, Boiss. ... „ 481

Plumbago Vol. Page
rosea, *Linn.* ... iii. 481
zeylanica, *Linn.* ... „ 480
sp., Griff. ... „ 481
Plumeria, *Linn.* ... iii. 641
acuminata, Roxb. ... „ 641
acutifolia, *Poir.* ... „ 641
PLUMERIEÆ ... iii. 621, 632
Pneumonanthe adscendens, Schmidt ... iv. 117
depressa, D. Don ... „ 115
Kurroo, D. Don ... „ 117
ornata, G. Don ... „ 116
Poa, *Linn.* ... vii. 337
airoides, Koel. ... „ 310
albida, Turcz. ... „ 355
alpina, *Linn.* ... „ 338
alpina, Griseb. ... „ 339
alpina, Hk. f. & T. vii. 340, 344, 346
alpina, Str. & Wint. ... vii. 345
altaica, Griseb. ... „ 341
altaica, Munro ... „ 344
amabilis, Heyne ... vii 318, 323
amabilis, Linn. ... vii. 315
amabilis, Rottl. ... vii. 317, 318
angustifolia, Linn. ... vii. 340
annua, *Linn.* ... „ 345
aspera, Jacq. ... „ 314
asthenes, R. & S. ... „ 299
atroviridis, Ham. ... „ 318
attenuata, *Trin.* ... „ 340
attenuata, Griseb. ... „ 341
bifaria, Vahl ... vii. 325, 327
botryoides, Schlag. ... vii. 341
brevifolia, Kunth ... „ 295
Brownei, Kunth ... „ 319
bulbosa, *Linn.* ... „ 338
bulbosa, Duthie ... „ 338
bulbosa, Str. & Wint. ... „ 340
capillaris, Roxb. ... „ 315
? *cenisia*, Duthie ... „ 342
cernua, Wight ... „ 318
cernua, Willd. ... „ 327
Chariis, Schult. ... „ 318
chinensis, Burm. ... „ 298
chinensis, Linn. ... „ 299
chinensis, Rottl. ... „ 298
cilianensis, All. ... „ 320
ciliaris, Roxb. ... „ 315
ciliata, Roxb. ... „ 313
compressa, Griseb. ... „ 347
compressa, Hk. f. & T. ... „ 340
contracta, Retz. ... „ 298
convoluta, Heyne ... „ 318
Corana, Ham. ... „ 316
coromandelina, Koen. ... „ 326
coromandelina, Roth ... „ 327
cristata, Withering ... „ 308

Poa Vol. Page
curvata, Heyne ... vii. 320
cylindrica, Heyne ... „ 313
cynosuroides, Retz. ... „ 325
decipiens, Br. ... „ 299
? *dependens*, Hornem. ... „ 319
despiciens, Link ... „ 315
diandra, Ham. ... „ 316
diandra, Roxb. ... „ 316
diandra, Wight ... „ 318
diaphana, Trin. ... „ 337
diarrhena, Schult. ... „ 316
distans, Heyne ... „ 318
distans, Linn. ... „ 347
duplo-ciliaris, Roxb. ... „ 313
dura, Scop. ... „ 335
effusa, Royle ... „ 343
elegans, Roxb. ... „ 318
elegans, Wight & Ham. ... „ 320
elegantula, Kunth ... „ 318
elongata, Willd. ... „ 319
Eragrostis, Cav. ... „ 320
Eragrostis, Linn. ... „ 321
Falconeri, *Hk. f.* ... „ 342
ferruginea, Thunb. ... „ 324
flexuosa, *Wahlb.* ... „ 342
flexuosa, Hk. f. & T. vii. 340, 343, 344
flexuosa, Roxb. ... vii. 320
flexuosa, Royle ... „ 341
flexuosa, Str. & Wint. ... „ 341
Gammieana, *Hk. f.* ... „ 345
gangetica, Roxb. ... „ 318
glabra, Rottl. ... „ 322
glutinosa, Roxb. ... „ 315
hansiana, Royle ... „ 346
himalayana, *Nees* ... „ 344
himalayana, Hk. f. & T. ... „ 343
hirsuta, Rottl. ... „ 315
hirtiglumis, *Hk. f.* ... „ 343
hyemalis, Ham. ... „ 317
incurva, Rottl. ... vii. 315, 316
incurvata, Rottl. ... vii. 313
indica, Koen. ... „ 323
interrupta, Br. ... „ 319
interrupta, Lamk. ... „ 316
japonica, Thunb. ... „ 317
khasiana, *Stapf* ... „ 343
Koenigii, Kunth ... „ 316
laevis, Heyne ... „ 318
laevis, Rottl. ... vii. 315, 322
lagopodioides, Kunth ... vii. 334
lagopoides, Nees ... „ 295
Laka, Ham. ... „ 317
latifolia, Forst. f. ... „ 332
latifolia, Wall. ... „ 316
laxa, Duthie ... „ 341
laxa, Hk. f. & T. ... „ 341
malabarica, Heyne ... „ 315

Poa Vol. Page
malabarica, Klein ... vii. 298
malabarica, Linn. ... „ 332
malabarica, Retz. ... „ 299
massavensis, Fresen. ... „ 334
maysorensis, Rottl. ... „ 239
multiflora, Forsk. ... „ 320
multiflora, Roxb. ... vii. 317, 320
nemoralis, *Linn.* ... vii. 341
nemoralis, Heyne ... „ 332
nemoralis, Hk. f. & T. ... „ 344
nepalensis, Hk. f. & T. vii. 344, 346
nepalensis, Wall. ... vii. 346
nigra, Clem. ... „ 323
nitida, Lamk. ... „ 308
nutans, Heyne ... „ 318
nutans, Koen. ... „ 316
nutans, Retz. ... „ 318
nutans, Wight ... „ 323
ovina, A. Rich. ... „ 318
pallida, Jacq. ... „ 355
pamphylica, Boiss. ... „ 337
panicea, Retz. ... „ 298
paniculata, Roxb. ... „ 314
papposa, Desf. ... „ 323
paradoxa, Kar. & Kir. ... „ 337
parviflora, Br. ... „ 323
parvula, Un. Itin. ... „ 337
pauciflora, Rottl. ... „ 321
pellucida, Br. ... „ 323
persica, *Trin.* ... „ 337
phleoides, Lamk. ... „ 309
Phullica, Ham. ... „ 323
pilosa, Linn. ... „ 323
plumosa, Heyne ... „ 315
plumosa, Retz. ... „ 315
polycolea, *Stapf* ... „ 342
polymorpha, Br. ... vii. 317, 319
? *polymorpha*, Koen. „ 320, 322
pratensis, *Linn.* ... vii. 339
pratensis, Hk. f. & T. ... „ 340
procera, Roxb. ... „ 329
procera, Wight ... „ 318
pseudamabilis, Roxb. ... „ 317
pseudo-pratensis, *Hk. f.* ... „ 340
pulchella, Wall. ... „ 319
punctata, Linn. f. ... „ 323
pyramidata, Lamk. ... „ 308
repens, Bieb. ... vii. 333, 334
ripara, Willd. ... vii. 315
Roxburghiana, Schult. ... „ 320
Royleana, Nees ... „ 345
rubens, Lamk. ... „ 317
rupestris, Roth ... „ 313
secunda, Roxb. ... vii. 326, 327
secundaria, Heyne ... vii. 299
serotina, Str. & Wint. ... „ 342
setacea, Hoffm. ... „ 340

Poa Vol. Page
setacea, Rottl. ... vii. 315
soongarica, Boiss. ... „ 337
speciosa, Ham. ... „ 317
sterilis, Bieb. ... „ 341
strigosa, Hoffm. ... „ 340
subsecunda, Ham. ... „ 320
subtilis, Kar. & Kir. ... „ 337
Telphulia, Ham. ... „ 315
tenella, Br. ... „ 317
tenella, Heyne ... „ 323
tenella, Linn. ... „ 315
tenella, Roxb. ... „ 315
tenellula, Kunth ... „ 317
tenuifolia, A. Rich. ... „ 322
tibetica, *Munro* ... „ 339
tortuosa, Spreng. ... „ 320
tremula, *Stapf* ... „ 344
tremula, Lamk. ... „ 320
trivialis, Griseb. ... „ 344
trivialis, Hk. f. & T. vii. 340, 341
tunetana, Spreng. ... vii. 334
unioloides, Retz. ... „ 317
variegata, Jacquem. ... vii. 340, 341
verticillata, Cav. ... vii. 323
virgata, Roth ... „ 298
viscosa, Retz. ... „ 315
viscosa, Wall. ... „ 318
Zizania, Jacquem. ... „ 330
sp., Hk. f. & T., vii. 337, 342, 343, 344, 346
sp., Str. & Wint. ... vii. 343
sp., Wall. ... „ 346
POACEÆ ... vii. 5
Podadenia, *Thw.* ... v. 422
sapida, *Thw.* ... „ 423
Thwaitesii, Muell. ... „ 423
Podalyria bracteata, Roxb. ... ii. 248
PODALYRIEÆ ... ii. 56
Podanthera pallida, Wight ... vi. 124
Podianthus arifolius, Schnitzl. vi. 297
PODOCARPEÆ ... v. 644
Podocarpium, Benth. ... ii. 165
Podocarpus, *L'Herit.* ... v. 649
agathifolia, Bl. ... „ 649
bracteata, Bl. ... „ 649
chinensis, Wall. ... „ 649
cupressina, *Br.* ... „ 650
Horsfieldii, Wall. ... „ 650
imbricata, Bl. ... „ 650
latifolia, *Wall.* ... „ 649
macrophylla, D. Don ... „ 649
macrophylla, Wall. ... „ 650
neriifolia, *D. Don* ... „ 649
polystachya, Br. ... „ 650
Podochilus, *Bl.* ... vi. 80
acicularis, *Hk. f.* ... „ 82
bicolor, Miq. ... v. 726

Podochilus Vol. Page
cultratus, *Lindl.* ... vi. 80
falcatus, *Lindl.* ... „ 80
khasianus, *Hk. f.* ... „ 81
lucescens, *Bl.* ... „ 82
malabaricus, *Wight* ... „ 80
microphyllus, *Lindl.* ... „ 81
microphyllus, Wall. ... „ 81
saxatilis, *Lindl.* ... „ 81
similis, Bl. ... „ 81
unciferus, *Hk. f.* ... „ 81
Podolasia, *N. E. Br.* ... vi. 550
stipitata, *N. E. Br.* ... „ 550
Podolotus hosackioides, Royle ii. 123
Podophyllum, *Linn.* ... i. 112
Emodi, *Wall.* ... „ 112
hexandrum, Royle ... „ 112
Podosemum, Wall. ... vii. 259
virginicum, Link ... „ 249
Podostemon, *Michx.* ... v. 64
acuminatus, *Wedd.* ... „ 66
algæformis, *Benth.* ... „ 65
dendroides, Thw. ... „ 65
dichotomus, *Gardn.* ... „ 64
elongatus, *Gardn.* ... „ 65
? Gardneri, Harv. ... „ 66
Griffithii, Gardn. ... „ 64
Griffithii, Wall. ... „ 64
griseus, Gardn. ... „ 66
Hookerianus, *Wedd.* ... „ 65
Johnsonii, *Wedd.* ... „ 66
microcarpus, *Wedd.* ... „ 66
minor, *Benth.* ... „ 67
olivaceus, *Gardn.* ... „ 66
pterophyllus, *Benth.* ... „ 67
rigidus, Gardn. ... „ 64
selaginoides, *Benth.* ... „ 68
stylosus, *Benth.* ... „ 64
subulatus, *Gardn.* ... „ 65
Wallichii, *Br.* ... „ 67
Wightii, Gardn. ... „ 64
PODSTEMONACEÆ ... v. 61
Pœciloneuron, *Bedd.* ... i. 278
indicum, *Bedd.* ... „ 278
pauciflorum, *Bedd.* ... „ 278
Pogochilus, Falc. ... vi. 88
Pogonanthera, *Bl.* ... ii. 550
pulverulenta, *Bl.* ... „ 550
Pogonatherum, *Beauv.* ... vii. 141
contortum, Brongn. ... „ 109
crinitum, *Trin.* ... „ 141
majus, Griseb. ... „ 142
polystachyum, Kunth ... „ 141
polystachyum, R. & S. ... „ 141
refractum, Nees ... „ 141
rufo-barbatum, *Griff.* ... „ 142
saccharoideum, *Beauv.* ... „ 141
? tenue, Edgew. ... „ 147

Pogonatherum Vol. Page
sp., Griff. ... ... vii. 141
Pogonia, *Griff.* ... ... vi. 118
biflora, *Wight* ... ... „ 119
carinata, *Lindl.* .. ... „ 121
carinata, Wight ... ... „ 121
cuprea, Par. ... ... „ 119
flabelliformis, *Lindl.* ... „ 121
Gammiena, *Hk. f.* ... ... „ 120
juliana, *Wall.* ... ... „ 119
macroglossa, *Hk. f.* . ... „ 120
maculata, *Par. & Rchb. f.* „ 120
Nervilia, Bl. ... ... „ 121
plicata, *Lindl.* ... ... „ 119
Scottii, *Rchb. f.* ... ... „ 120
velutina, *Par. & Rchb. f.* „ 119
sp., Griff. ... ... vi. 120, 121
Pogonopsis tenera, Presl ... vii. 141
Pogonostylis squarrosa, Bertol. vi. 635
Pogonotrophe assamica, Miq. v. 526
aurantiaca, Miq. ... ... „ 532
borneensis, Miq. (*lapsu* Ficus) ... ... „ 527
dasyphylla, Miq. ... „ 526
flavidula, Miq. ... ... „ 531
glandulifera, Miq. ... ... „ 532
javana, Miq. ... ... „ 527
lævis, Miq. ... ... „ 526
macrocarpa, Miq. ... ... „ 534
piperifolia, Miq. ... ... „ 527
pubigera, Miq. ... ... „ 528
reticulata, Miq. ... ... „ 528
rigida, Miq. ... ... „ 528
sumatrana, Miq. ... ... „ 532
verrucosa, Miq. ... ... „ 528
Pogostemon, *Desf.* ... ... iv. 631
amarantoides, *Benth.* ... „ 634
atropurpureus, *Benth.* ... „ 636
brachystachys, *Benth.* ... „ 637
comosus, Miq. ... ... „ 632
elsholtzioides, *Benth.* ... „ 634
fraternus, *Miq.* ... ... „ 635
frutescens, Grah. ... ... „ 633
Gardneri, *Hk. f.* ... ... „ 632
glaber, *Benth.* ... ... „ 633
Heyneanus, Benth. ... ... „ 633
hirsutus, *Benth.* ... ... „ 635
hirsutus, Wight ... ... „ 635
imberbe, Wight ... ... „ 637
intermedius, Wall. ... ... „ 633
mollis, *Benth.* ... ... „ 635
paludosus, *Benth.* ... ... „ 635
paniculatus, *Benth.* ... ... „ 631
parviflorus, *Benth.* ... ... „ 632
Patchouli, *Pelle* ... ... „ 633
Patchouli, Clarke ... ... „ 624
Patchouli, Hook. ... ... „ 634
petiolaris, Benth. ... ... „ 635
Pogostemon Vol. Page
plectranthoides, *Desf.* ... iv. 632
pubescens, Benth. ... ... „ 633
purpurascens, *Dalz.* ... „ 632
purpuricaulis, Dalz. ... „ 633
reflexus, *Benth.* ... ... „ 637
rotundatus, *Benth.* ... ... „ 636
rotundatus, Wight ... ... „ 636
rupestris, *Benth.* ... ... „ 634
speciosus, *Benth.* ... ... „ 637
strigosus, *Benth.* ... ... „ 636
suavis, Ten. ... ... „ 634
travancoricus, *Bedd.* ... „ 637
tuberculosus, *Benth.* ... „ 633
verticillatus, Miq. ... ... „ 640
vestitus, *Benth.* ... ... „ 636
villosus, *Benth.* ... ... „ 632
Wightii, *Benth.* ... ... „ 635
sp., Hk. f. & T. ... ... „ 635
Poinciana, *Linn.* ... ... ii. 260
elata, *Linn.* ... ... „ 260
pulcherrima, Linn. ... ... „ 255
regia, Bojer ... ... „ 260
Roxburghii, G. Don ... ... „ 257
Poinsettia pulcherrima, R. Grah. ... ... v. 239
Poivrea Roxburghii, DC. ... ii. 452
Polanisia burtporensis, Munro ... ... i. 169
Chelidonii, DC. ... ... „ 170
dodecandra, DC. ... ... „ 170
felina, DC. ... ... „ 170
heterophylla, Wall. ... ... „ 170
icosandra, W. & A. ... ... „ 170
Leschenaultii, DC. ... ... „ 170
Schraderi, DC. ... ... „ 170
simplicifolia, Camb. ... „ 169
viscosa, DC. ... ... „ 170
POLEMONIACEÆ ... ... iv. 133, 734
Polemonium, *Linn.* ... ... iv. 133
cœruleum, *Linn.* ... ... „ 133
Pollia, *Thunb.* ... ... vi. 367
Aclisia, *Hassk.* ... ... „ 367
glaucescens, Teysm. & Binn. „ 367
indica, Thw. ... ... „ 368
japonica, Hance ... ... „ 368
pentasperma, *Clarke* ... „ 368
purpurea, Hort. ... ... „ 383
sorzogonensis, *Endl.* ... „ 367
subumbellata, *Clarke* ... „ 368
thyrsiflora, *Endl.* ... ... „ 367
POLLIEÆ ... ... vi. 366
Pollinia, *Trin.* ... ... vii. 109
argentea, *Trin.* ... ... „ 111
argentea, Balans. ... ... „ 112
articulata, *Trin.* ... ... „ 109
birmanica, *Hk. f.* ... ... „ 113
brevifolia, Spreng. ... ... „ 165

Pollinia Vol. Page
ciliaris, Spreng. ... ... vii. 146
ciliata, *Trin.* ... ... „ 116
ciliata, Nees ... ... „ 116
Cumingii, *Nees* ... ... „ 114
Cumingii, Thw. ... ... „ 112
delicatula, *Hk. f.* ... ... „ 117
depauperata, Spreng. ... „ 210
eriopoda, Hance ... ... „ 129
eucnemis, *Nees* ... ... „ 114
fastigiata, Spreng. ... ... „ 167
filiformis, Spreng. ... ... „ 299
fimbriata, *Hack.* ... ... „ 112
fragilis, Spreng. ... ... „ 165
? *fulta*, Desv. ... ... „ 167
fulva, Benth. ... ... „ 114
fulva, Spreng. ... ... „ 193
grata, *Hack.* ... ... „ 115
Gryllus, Spreng. ... ... „ 188
hirtifolia, *Hack.* ... ... „ 111
imberbis, *Nees* ... ... „ 117
japonica, Benth. ... ... „ 118
japonica, Fr. & Sav. ... „ 117
japonica, Miq. ... ... „ 118
lancea, Nees ... ... „ 116
laxa, Nees ... ... „ 116
Lehmanni, W. & A. ... ... „ 139
miscantha, Hk. f. & T. ... „ 116
mollis, *Hack.* ... ... „ 111
monandra, Spreng. ... ... „ 141
monantha, *Nees* ... ... „ 116
monantha, Hk. f. & T. ... „ 116
? *montana*, Nees ... ... „ 116
nepalensis, Benth. ... ... „ 107
nuda, *Trin.* ... ... „ 117
pallens, *Hack.* ... ... „ 110
pallida, R. & S. ... ... „ 188
phaeothrix, *Hack.* ... ... „ 112
polystachya, Spreng. ... „ 141
quadrinervis, *Hack.* ... „ 110
Ridleyi, *Hack.* ... ... „ 114
setifolia, Nees ... ... „ 109
speciosa, *Hack.* ... ... „ 113
Stapfii, *Hk. f.* ... ... „ 115
striata, Spreng. ... ... „ 136
Thwaitesii, *Hack.* ... ... „ 111
tristachya, Thw. ... vii. 112, 116
vagans, *Nees* ... ... vii. 115
vaginata, Spreng. ... ... „ 165
velutina, *Hack.* ... ... „ 113
villosa, Munro ... ... „ 110
Wallichiana, Nees ... ... „ 116
Willdenowiana, Benth. ... „ 117
Poloa Wightiana, DC. ... ... iii 299
Polyadenia grandis, Nees ... v. 162
reticulata, Nees ... ... „ 183
Polyalthia, *Bl.* ... ... i. 62
? aberrans, *Maing.* ... ... „ 67

Polyalthia Vol. Page
acuminata, *Thw.* ... ... i. 63
argentea, *Hk. f. & T.* ... „ 67
bifaria, *Benth. & Hk. f.* ... „ 62
biglandulosa, *Benth. & Hk. f.* ... ... „ 65
cardiopetala, Dalz. ... ... „ 75
cauliflora, *Hk. f. & T.* ... „ 66
cerasoides, *Benth. & Hk. f.* „ 63
cinnamomea, *Hk. f. & T.* „ 65
coffeoides, *Benth. & Hk. f.* „ 62
costata, *Hk. f. & T.* ... „ 67
fragrans, *Benth. & Hk. f.* „ 63
fruticans, A. DC. ... ... „ 51
hypoleuca, *Hk. f. & T.* ... „ 63
Jenkinsii, *Benth. & Hk. f.* „ 64
Korinti, *Benth. & Hk. f.* ... „ 64
longifolia, *Benth. & Hk. f.* „ 62
macrophylla, *Hk. f. & T.* „ 66
macrophylla, Bl. ... ... „ 74
magnoliæflora, *Maing.* ... „ 64
Moonii, *Thw.* ... ... „ 66
nitida, *Benth. & Hk. f.* ... „ 64
obliqua, *Hk. f. & T.* ... „ 67
persicæfolia, *Benth. & Hk. f.* „ 66
rufescens, *Hk. f. & T.* ... „ 66
sclerophyllya, *Hk. f. & T.* „ 65
simiarum, *Benth. & Hk. f.* „ 63
suberosa, *Benth. & Hk. f* „ 65
Polycarpæa, *Lamk.* ... ... i. 245
corymbosa, *Lamk.* ... ... „ 245
densiflora, Wall. ... ... „ 245
diffusa, *W. & A.* ... ... „ 245
indica, Lamk. ... ... „ 245
spadicea, Lamk. ... ... „ 245
spicata, *W. & A.* ... ... „ 246
staticæformis, Hochst. & Steud. ... ... „ 246
POLYCARPEÆ ... ... i. 213
Polycarpon, *Linn.* ... ... i. 244
Benthamii, Wall. ... ... „ 245
depressa, DC. ... ... „ 245
lanuginosa, Wall. ... ... „ 245
Lœflingiæ, *Benth. & Hk. f.* „ 245
Polychilus Cornu-cervi, Breda vi. 29
Polydontia arborea, Bl. ... ii. 320
ceylanica, Wight ... ... „ 319
Walkerii, Bl. ... ... „ 321
Polydragma, *Hk. f.* ... ... v. 456
mallotiformis, *Hk. f.* ... „ 457
Polygala, *Linn.* ... ... i. 200
abyssinica, *Fresen.* ... ... „ 202
arillata, *Ham.* ... ... „ 200
? *Arnottiana*, Steud. ... „ 204
Arnottiana, Hassk. ... ... „ 207
arvensis, Willd. ... ... „ 204
brachystachya, DC. ... ... „ 204
brachystachya, Bl. ... ... „ 204

Polygala Vol. Page
Buchanani, Ham. ... ... i. 203
buxiformis, Hassk. ... ... „ 205
campestris, Dalz. ... ... „ 203
canarana, Hassk. ... ... „ 207
ceylanica, Heyne ... ... „ 201
chinensis, *Linn.* ... ... „ 204
ciliata, Hb. Wight ... ... „ 204
ciliata, Linn. ... ... „ 207
? *confusa*, Hassk. ... ... „ 203
crotalarioides, *Ham.* ... „ 201
densiflora, Bl. ... ... „ 206
depauperata, Wall. ... ... „ 206
discolor, Ham. ... ... „ 202
elegans, Wall. ... ... „ 205
elongata, *Klein* ... ... „ 203
erioptera, *DC.* ... ... „ 203
eumekes, Hassk. ... ... „ 204
exigua, Hassk. ... ... „ 204
furcata, Royle ... ... „ 201
Gerardiana, Wall. ... ... „ 202
glabra, Heyne ... ... „ 204
glaucescens, Wall. ... .. „ 201
glaucoides, *Linn.* ... ... „ 203
glaucoides, Wight ... ... „ 204
glomerata, *Lour.* ... ... „ 206
glomerata, Thw. ... ... „ 205
grandiflora, Hb. Wight ... „ 204
granulata, Hassk. ... ... „ 203
Heyneana, Wall. ... ... „ 205
hirsutula, Arn. ... ... „ 203
Hohenackeriana, *Fisch. & Mey.* ... ... „ 202
hypoglauca, Hassk. ... ... „ 203
hyalina, Wall. ... ... „ 201
japonica, Houtt. ... ... „ 205
javana, *DC.* ... ... „ 201
khasiana, Hassk. ... ... „ 205
Kleinii, Hassk. ... ... „ 204
leptalea, *DC.* ... ... „ 202
linarifolia, Willd. ... ... „ 206
linarifolia, Heyne ... ... „ 204
linearifolia, DC. ... ... „ 206
macrolophos, Hassk. ... „ 205
macropetala, Hassk. ... „ 206
macrostachya, Hassk. ... „ 204
monopetala, Camb. ... ... „ 205
mucronata, Thw. ... ... „ 203
multibracteata, Wall. ... „ 204
Myrsinites, Royle ... ... „ 205
obtusata, DC. ... ... „ 203
oligophylla, DC. ... ... „ 202
pedunculosa, Thw. ... ... „ 205
persicariæfolia, *DC.* ... „ 202
procumbens, Roth ... ... „ 206
procumbens, Roth ... ... „ 204
? *prostrata*, Willd. ... ... „ 204
ramosa, Hb. Wight ... ... „ 204

Polygala Vol. Page
rosmarinifolia, *W. & A.* ... i. 204
rosmarinifolia, Thw. ... „ 203
Rothiana, W. & A. ... ... „ 204
scabra, Edgew. ... ... „ 202
serpyllifolia, Poir. ... ... „ 205
sibirica, *Linn.* ... ... „ 205
supina, Schreb. ... ... „ 202
telephioides, *Willd.* ... „ 205
? *tinctoria*, Vahl ... ... „ 201
tomentosa, Vahl ... ... „ 203
tranquebarica, Wight ... „ 204
tranquebarica, Mart. ... „ 204
triflora, Oliv. ... ... „ 203
triflora, Hassk. ... ... „ 204
triflora, Linn. ... ... „ 204
triphylla, Ham. ... ... „ 201
umbrosa, Mart. ... ... „ 206
Vahliana, DC. ... ... „ 203
varians, Mart. ... ... „ 206
vulgaris, Thunb. ... ... „ 205
Wallichiana, Wight ... ... „ 203
Wightiana, Wall. ... ... „ 203
sp., Griff. ... ... „ 205
POLYGALEÆ ... ... i. 200
POLYGONACEÆ ... . v. 22
POLYGONATEÆ ... ... vi. 300
Polygonatum, *Tourn.* ... ... vi. 319
brevistylum, *Baker* ... ... „ 319
Cathcartii, *Baker* ... ... „ 320
? *ciliatum*, Royle ... ... „ 320
cirrhifolium, *Royle* ... ... „ 322
geminiflorum, *Dcne.* ... „ 320
Govanianum, Royle ... ... „ 319
graminifolium, *Hook.* ... „ 319
Griffithii, *Baker* ... ... „ 320
Hookeri, *Baker* ... ... „ 320
Inglesii, Royle ... ... „ 322
Jacquemontianum, Kunth „ 321
Kingianum, *Coll. & Hemsl.* „ 322
leptophyllum, Royle .. ... „ 321
multiflorum, *Allioni* ... „ 319
nervulosum, *Baker* ... ... „ 319
officinale, Allioni ... ... „ 319
oppositifolium, *Royle* ... „ 320
punctatum, *Royle* ... ... „ 321
roseum, Hook. ... ... „ 321
sibiricum, Baker ... ... „ 322
verticillatum, *Allioni* ... „ 321
Polygonearum familiæ sedifolia, Wall. ... ... v. 22, 54
Polygonum, *Linn.* ... ... v. 23
acaule, *Hk. f.* ... ... „ 53
acidum, Pall. ... ... „ 49
acre, H. B. K. ... ... „ 40
acutatum, Lehm. ... ... „ 55
adenotrichum, Wall. ... „ 44
affine, *D. Don* ... ... „ 33

Polygonum Vol. Page
affine, Steph. ... v. 26
affine, Wall. ... „ 31
alatum, *Ham.* ... „ 41
alatum, Spreng. ... „ 42
alpestre, C. A. Mey. ... „ 25
alpestre, Wall. ... „ 25
alpinum, *All.* ... „ 49
alpinum, Meissn. ... „ 49
altissimum, Moench ... „ 30
ambiguum, Meissn. ... „ 33
ammanioides, J. & S. ... „ 26
amoenum, Bl. ... „ 30
amphibium, *Linn.* ... „ 34
amplexicaule, *D. Don* ... „ 32
angustifolium, D. Don ... „ 31
aquaticum, A. Gray ... „ 37
arachnoideum, Klotz. ... „ 35
arifolium, *Linn.* ... „ 46
asperulum, Wall. ... v. 39, 45
assamicum, *Meissn.* ... v. 36
auriculatum, Hk. f. & T. ... „ 47
auriculatum, Meissn. ... „ 44
aviculare, *Linn.* ... „ 26
aviculare, D. Don ... „ 27
Babingtoni, Endl. ... „ 40
Banca, Ham. ... „ 36
barbatum, *Linn.* ... „ 37
barbatum, Rottl. ... „ 40
barbatum, Roxb. ... „ 39
barbatum, Wall. ... „ 37
Bellardi, Boiss. ... „ 27
Biscaticlium (*Bisculatium*) Ham. ... „ 39
Bishiræ, Ham. ... „ 37
Bistorta, Garcke ... „ 32
brachiatum, Poir. ... „ 44
bracteatum, Spreng. ... „ 31
Brunonis, Wall. ... „ 33
bulbiferum, Royle ... „ 31
cæspitosum, Bl. ... „ 38
campanulatum, *Hk. f.* ... „ 51
capitatum, *Ham.* ... „ 44
carneum, C. Koch ... „ 32
chinense, *Linn.* ... „ 44
chinense, Roxb. ... „ 52
? *ciliatum*, Ham. ... „ 42
ciliatum, Roxb. ... „ 39
ciliosum, Meissn. ... „ 29
cliffortioides, Meissn. ... „ 28
cochinchinense, Meissn. ... „ 30
cognatum, *Meissn.* ... „ 25
confertum, Royle ... „ 26
confusum, Meissn. ... „ 32
conspersum, Meissn. ... „ 37
Convolvulus, *Linn.* ... „ 53
corymbosum, Willd. ... „ 44
crassifolium, Murr. ... „ 52

Polygonum Vol. Page
crispatum, Clarke ... v. 52
cymosum, Roxb. ... „ 44
cymosum, Trev. ... „ 55
delicatulum, *Meissn.* ... „ 24
dibotrys, D. Don ... „ 55
dichotomum, Bl. ... „ 48
dioicum, Ham. ... „ 55
divaricatum, Vill. ... „ 49
Donianum, Spreng. ... „ 33
Donii, Meissn. ... „ 38
Donii, Wall. ... „ 38
Donii, Wight ... „ 39
Dryandri, Spreng. ... „ 27
Dryandri, Wall. ... v. 28, 29
dumetorum, *Linn.* ... v. 54
effusum, Meissn. ... „ 28
elegans, Miq. ... „ 29
elegans, Roxb. ... „ 29
emarginatum, Roth ... „ 55
emarginatum, Wall. ... „ 55
Emodi, *Meissn.* ... „ 33
Fagopyrum, Linn. ... „ 55
filicaule, *Wall.* ... „ 25
filiforme, Thunb. ... „ 31
flaccidum, *Meissn.* ... „ 39
flaccidum, Roxb. ... „ 38
fluviatile, Ham. ... v. 34, 37
frondosum, *Meissn.* ... v. 50
glabratum, Meissn. ... „ 48
glabratum, Wall. ... „ 48
glabrum, *Willd.* ... „ 34
glaciale, *Hk. f.* ... „ 41
glutinosum, Wall. ... „ 35
Goyalpara, Ham. ... „ 37
gracile, Ham. ... „ 38
gracillimum, Spreng. ... „ 32
Griffithii, *Hk. f.* ... „ 54
guttuliferum, Miq. ... „ 42
Hagei, Royle ... „ 54
Hamiltonii, Meissn. ... „ 37
Hamiltonii, Spreng. ... „ 40
hastatum, Murr. ... „ 52
Hayii, Str. & Wint. ... „ 50
herniarioides, Del. ... i. 247, v. 27
herniarioides, Str. & Wint. v. 28
hirsutum, Ham. ... „ 36
hispidulum, Bl. ... „ 47
hispidum, Bab. ... „ 37
hispidum, Ham. ... „ 40
Hornemanni, Meissn. ... „ 37
horridum, Roxb. ... „ 47
humile, *Meissn.* ... „ 41
Hydropiper, *Linn.* ... „ 39
hypostictum, Miq. ... „ 36
illecebroides, Meissn. ... „ 28
indicum, Heyne ... „ 28
islandicum, *Hk. f.* ... „ 24

Polygonum Vol. Page
lanatum, Roxb. ... v. 35
lanigerum, *Br.* ... ,, 35
lapathifolium, *Linn.* ... ,, 35
laxum, Rchb. ... ,, 35
limbatum, *Meissn.* ... ,, 30
linifolium, Heyne ... ,, 28
macranthum, *Meissn.* ... ,, 40
macrophyllum, D. Don ... ,, 32
maculatum, Dyer & Trim. ,, 35
Manorœne (*Marmoramœ*), Ham. ... ,, 37
Meissneri, Wall. ... ,, 34
Metzianum, Miq. ... ,, 42
Meyeri, Steud. ... ,, 26
micranthemum, Franch. ... ,, 29
microcephalum, *D. Don* ... ,, 42
microphyllum, Klotz. ... ,, 25
minus, *Huds.* ... ,, 36
Miquelianum, Meissn. ... ,, 29
mite, ? Wall. ... v. 38, 39, 40
molle, *D. Don* ... v. 50
molle, Hk. f. & T. ... ,, 50
molle, Wight ... ,, 50
molliæforme, *Boiss.* ... ,, 27
mucronatum, Royle ... ,, 26
muricatum, *Meissn.* ... ,, 45
muricatum, Griff. ... ,, 47
muricatum, Hk. f. & T. ... ,, 47
muricatum, Wall. ... ,, 47
muticum, Moench ... ,, 31
nepalense, Meissn. ... v. 41, 42
nodosum, Pers. ... v. 35
nummularifolium, *Meissn.* ,, 53
nutans, Roxb. ... ,, 35
ochreatum, Houtt. ... ,, 30
? *Olivieri*, Meissn. ... ,, 27
orientale, *Linn.* ... ,, 30
orientale, Wall. ... ,, 30
ovatum, Heyne ... ,, 44
oxyphyllum, Wall. ... ,, 33
paleaceum, *Wall.* ... ,, 32
paludosum, Griff. ... ,, 54
panduræforme, Ham. ... ,, 45
paniculatum, *Bl.* ... ,, 49
Pani-maricha, Roxb. ... ,, 39
Paronychia, C. A. Mey. ... ,, 26
paronychioides, *C. A. Mey.* ,, 26
patens, D. Don ... ,, 44
pedunculare, *Wall.* ... ,, 48
perfoliatum, *Linn.* ... ,, 46
perforatum, Aitch. ... ,, 41
perforatum, Meissn. ... v. 41, 42
perforatum, Wall. ... v. 41
perpusillum, *Hk. f.* ... ,, 32
Persicaria, *Linn.* ... ,, 35
Persicaria, Wall. ... ,, 34
petiolatum, D. Don ... ,, 33

Polygonum Vol. Page
pilosum, Roxb. ... v. 30
plebejum, *Br.* ... ,, 27
podocephalum, Klotz. ... ,, 43
Poiretii, Meissn. ... ,, 34
polycephalum, Wall. ... ,, 44
polymorphum, Meissn. ... ,, 49
polystachyum, *Wall.* ... ,, 50
Posumbu, *Ham.* ... ,, 38
Posumbu, Meissn. ... ,, 40
Posumbu, Thw. ... ,, 39
Posumbu, Wall. ... ,, 36
prætermissum, *Hk. f.* ... ,, 47
prostratum, Roxb. ... ,, 29
pterocarpum, *Wall.* ... ,, 54
pulchrum, Bl. ... ,, 30
punctatum, Ham. ... v. 41, 42
quadrifidum, Ham. ... v. 34
quadrifidum, Str. & Wint. ,, 35
ramoso-spicatum, Klotz. ... ,, 51
Rapte, Ham. ... ,, 38
recumbens, *Royle* ... ,, 25
repens, Wall. ... ,, 44
reticulatum, De Bruyn ... ,, 43
rivulare, Helf. ... ,, 39
rivulare, Koen. ... ,, 37
rottboellioides, J. & S. ... ,, 27
Rottleri, Roth ... ,, 39
Roxburghii, Meissn. ... ,, 27
rude, *Meissn.* ... ,, 49
rugosum, Ham. ... ,, 55
rumicifolium, *Royle* ... ,, 51
rumicifolium, Pall. ... ,, 52
runcinatum, *Ham.* ... ,, 43
rupestre, Kar. & Kir. ... ,, 26
sagittatum, *Linn.* ... ,, 47
sagittatum, D. Don ... ,, 47
salicornioides, *J. & S.* ... ,, 26
scabrinerve, Royle ... ,, 34
senegalense, Boiss. ... ,, 34
sericeum, Pall. ... ,, 52
serrulatum, *Lagasc.* ... ,, 38
sibiricum, *Laxm.* ... ,, 52
sibiricum, Linn. f. ... ,, 49
Sieboldii, Meissn. ... ,, 47
sinuatum, *Royle* ... ,, 44
speciosum, Wall. ... ,, 33
sphærocephalum, *Wall.* ... ,, 43
sphærostachyum, *Meissn.* ,, 32
splendens, Klotz. ... ,, 32
stagninum, *Ham.* ... ,, 37
staticiflorum, Wall. ... ,, 42
stenophyllum, Meissn. ... ,, 32
strictum, Allioni ... ,, 36
strigosum, *Br.* ... ,, 47
strigosum, Ham. ... v. 36, 42
strigosum, Thw. ... v. 47
tataricum, Linn. ... ,, 55

Polygonum Vol. Page
tataricum, Wall. ... ... v. 52
tenellum, Bl. ... ... ,, 36
tenellum, Roxb. ... ... v. 34, 39
tenue, D. Don. ... ... v. 32
tinctorium, Ait. ... ... ,, 36
tomentosum, *Willd.* ... ,, 30
tomentosum, Wall. ... ... ,, 37
torquatum, De Bruyn ... ,, 30
tortuosum, *D. Don* ... ... ,, 52
triangulare, Wall. ... ... ,, 55
tubulosum, *Boiss.* ... ... ,, 27
vacciniifolium, *Wall.* ... ,, 33
virginianum, *Linn.* ... ... ,, 31
viscosum, *Ham.* ... ... ,, 36
viviparum, *Linn.* ... ... ,, 31
volubile, Turcz. ... ... ,, 55
Wallichii, *Meissn.* ... ... ,, 43
Wallichii, Wight ... ... ,, 43
sp., Hk. f. & T. v. 40, 45, 46, 50, 51, 52, 53, 54
Polymnia abyssynica, Linn. f. iii. 308
Polyodontia (vide *Polydontia*)
Polyosma, *Bl.* ... ... ii. 408
fragrans, *Benn.* ... ... ,, 408
ilicifolia, Bl. ... ... ,, 409
integrifolia, *Bl.* ... ... ,, 409
lætevirens, Griff. ... ... ,, 409
mutabilis, *Bl.* ... ... ,, 409
Wallichii, Kurz ... ... ,, 409
Polyozus latifolia, Bl. ... ... iii. 177
? *madraspatana*, DC. ... ,, 102
Polypara cochinchinensis, Lour. v. 78
Polyphema Champeden, Lour. v. 542
Jaca, Lour. ... ... ,, 541
Polyphragmon flavescens, Kurz iii. 127
Polypleurum orientale, Tayl. v. 67
Polypogon, Desf. ... ... vii. 245
crinitus (lapsu *cruentus*), Duthie ... ... ,, 245
cruentus, Duthie (vide *crinitus*) ... ... ,, 245
demissus, Steud. ... ... ,, 246
elongatus, Lagasc. ... ... ,, 246
fugax, Nees ... ... ,, 245
Higegaweri, Steud. ... ... ,, 246
Lagascæ, R. & S. ... ... ,, 246
littoralis, *Sm.* ... . ,, 246
maritimus, Duthie ... ... ,, 245
monspeliensis, *Desf.* ... ,, 245
nepalensis, Nees ... ... ,, 245
paniceus, Lag. ... ... ,, 245
polysetus, Steud. ... ... ,, 245
zeylanicus, Nees ... ... ,, 245
Polyscalis (lapsu *Polyscelis*)
capitata, Wall. ... ... iv. 723
Sequax, Wall. ... ... ,, 722
Polyscias, *Forst.* ... ... ii. 727
Polyscias Vol. Page
acuminata, *Seem.* ... ... ii. 727
pinnata, *Forst.* ... ... ,, 727
Polysolenia, *Hk. f.* ... ... iii. 94
Wallichii, *Hk. f.* ... ... ,, 94
Polyspora axillaris, Chois.... i. 282
Polystachya, *Hook.* ... ... vi. 20
luteola, Hook. ... ... ,, 21
luteola, Wight ... ... ,, 21
mauritiana, Spreng. ... ,, 21
purpurea, *Wight* ... ... ,, 21
ramosa, Gardn. ... ... v. 823
Wightii, *Rchb. f.* ... ... vi. 21
zeylanica, *Lindl.* ... ... ,, 21
Polystorthia, Bl. ... ... ii. 320
Polytoca, *Br.* ... ... vi. 100
barbata, *Stapf* ... ... ,, 102
bracteata, *Br.* ... ... ,, 101
Cookii, *Stapf* ... ... ,, 101
punctata, *Stapf* ... ... ,, 102
semiteres, *Benth.* ... ... ,, 101
Wallichiana, *Benth.* ... ,, 101
Polytrias praemorsa, Hack... vii. 210
Polyura, *Hk. f.* ... ... iii. 76
geminata, *Hk. f.* ... ... ,, 77
Polyzygus, *Dalz.* ... ... ii. 697
tuberosus, *Dalz.* ... . ,, 698
Pomacea, Griff. ... ... ii. 381
Pomaderris capsularis, G. Don i. 642
Pomasterion japonicum, Miq. ii. 633
Pomatocalpa spicatum, Kuhl & Hasselt. ... ... vi. 74
Pometia, *Forst.* ... ... i. 691
eximia, Hk. f. ... ... ,, 691
pinnata, Forst. ... ... ,, 691
tomentosa, *Kurz* ... i. 690, 691
ternata, Forst. ... ... ,, 674
Pommereulla, *Linn. f.* ... vii. 300
Cornucopiæ, *Linn. f.* ... ,, 300
elongata, W. & A. ... ... ,, 300
monœca, Rottl. ... ... ,, 284
monoica, Wall. ... ... ,, 284
Royleana, Steud. ... ... ,, 284
Pongamia, *Vent.* ... ... ii. 239
acuminata, Grah. ... ... ,, 247
amæna, Wall. ... ... ,, 245
angustifolia, Ham. ... ... ,, 110
atropurpurea, Wall. ... ,, 108
cærulea, Grah. ... ... ,, 107
cana, Grah. ... ... ,, 105
canarensis, Dalz. ... ... ,, 246
cassioides, Wall. ... ... ,, 105
? *caudata*, Grah. ... ... ,, 109
cinerea, Grah. ... ... ,, 106
Corcor, Grah. ... ... ,, 105
coriacea, Grah. ... ... ,, 240
crassifolia, Wall. ... ... ,, 194
cuneifolia, Grah. ... ... ,, 243

Pongamia ... Vol. Page
dubia, Grah. ... ... ii. 243
elegans, Grah. ... ... „ 242
elliptica, Wall. ... ... „ 243
elongata, Grah. ... ... ii. 243, 247
emarginata, Wall. ... ... ii. 245
? *extensa*, Wall ... ... „ 109
ferruginea, Wall. ... ... „ 246
floribunda, Grah. ... ... „ 242
fruticosa, Grah. ... ... „ 109
glabra, *Vent.* ... ... „ 240
grandifolia, Grah. ... ... „ 246
heterocarpa, Wall. ... ... „ 106
Heyneana, Grah. ... ... „ 244
Heyneana, W. & A. ... ... „ 245
Horsfieldii, Miq. ... ... „ 243
hypoleuca, Miq. ... ... „ 243
macrophylla, Grah. ... ... „ 108
marginata, Grah. ... ... „ 243
monadelpha, Grah. ... ... „ 243
oblonga, Grah. ... ... „ 106
oblonga, Wall. ... ... „ 246
obovata, Wall. ... ... „ 243
ovalifolia, W. & A. ... ... „ 247
palustris, Grah. ... ... „ 106
paniculata, Grah. ... ... „ 106
paniculata, Wight ... ... „ 245
pendula, Grah. ... ... „ 105
racemosa, Grah. ... ... „ 105
reflexa, Grah. ... ... „ 245
religiosa. Wight ... ... „ 241
rigida, Wall. ... ... „ 194
rosea, Grah. ... ... „ 194
secunda, Grah. ... ... „ 247
sericea, Vent. ... ... „ 104
sinuata, Wall. ... ... „ 246
tetraptera, Ht. Calc. ... „ 106
triphylla, Wight ... ... „ 241
uliginosa, DC. ... ... „ 241
volubilis, Zoll. & Mor. „ 243
sp., Wall. ... ... „ 246
Pongatium indicum, Lamk.... iii. 438
Pontederia dilatata, Andr. ... vi. 363
hastata, Linn. ... ... „ 362
pauciflora, Bl. ... ... „ 363
plantaginea, Roxb. ... ... „ 363
racemosa, Ham. ... ... „ 363
sagittata, Roxb. ... ... „ 363
sagittifolia, Heyne ... ... „ 363
vaginalis, Linn. ... ... „ 363
PONTEDERIACEÆ ... ... vi. 362
Pootia cereopsifolia, Miq. ... ii. 439
Popowia, *Endl.* ... ... i. 68
Beddomeana, *Hk. f. & T.* „ 68
fœtida, *Maing.* ... ... „ 69
Helferi, *Hk. f. & T.* ... „ 69
nervifolia, *Maing.* ... ... „ 69
pauciflora, *Maing.* ... ... „ 69

Popowia ... Vol. Page
ramosissima, *Hk. f. & T.*... i. 68
ramosissima, Bedd. ... ... „ 68
tomentosa, *Maing.* ... ... „ 70
Populus, *Linn.* ... ... v. 637
alba, *Linn.*... ... ... „ 638
balsamifera, *Linn.* ... ... „ 638
ciliata, *Wall.* ... ... „ 638
diversifolia, Schrank ... „ 638
euphratica, *Oliv.* ... ... „ 638
fastigiata, Desf. ... ... „ 638
laurifolia, Ledeb. ... ... „ 638
microcarpa, *Hk. f. & T.* ... „ 639
nigra, Linn. ... ... „ 638
pyriformis, Royle ... ... „ 638
rotundifolia, Griff. ... ... „ 638
suaveolens, Loud. ... ... „ 638
Porana, *Burm.* ... ... iv. 221
grandiflora, *Wall.* ... ... „ 221
malabarica, *Clarke*... ... „ 223
paniculata, *Roxb.* ... ... „ 222
racemosa, *Roxb.* ... ... „ 222
racemosa, Dalz. & Gibs. ... „ 223
speciosa, Benth. ... ... „ 221
spectabilis, *Kurz* ... ... „ 221
stenoloba, *Kurz* ... ... „ 221
truncata, *Kurz* ... ... „ 223
volubilis, *Burm.* ... ... „ 222
sp., Hk. f. & T. ... ... „ 223
Porophyllum Cusimbua, DC. iii. 334
Porpax, Lindl. ... ... v. 785
reticulata, Lindl. ... ... „ 786
Portulaca, *Linn.* ... ... i. 246
cristata, Ham. ... ... „ 247
decumbens, Vahl ... ... ii. 661
foliosa, Ker ... ... i. 247
geniculata, Royle ... ... „ 247
lævis, Ham. ... ... „ 246
meridiana, Linn. ... ... „ 247
napiformis, F. Muell. ... „ 247
oleracea, *Linn.* ... ... „ 246
pilosa, Hb. Madr. ... ... „ 247
quadrifida, *Linn.* ... ... „ 247
suffruticosa, Wight ... „ 247
suffruticosa, Thw. ... ... „ 246
tuberosa, *Roxb.* ... ... „ 247
Wightiana, *Wall.* ... ... „ 247
PORTULACEÆ ... ... i. 246
Posidonia serrulata, Spreng. vi. 570
serrulata, Thw. ... ... „ 570
Posoqueria dumetorum, Roxb. iii. 110
fasciculata, Roxb. ... ... „ 109
floribunda, Roxb. ... ... „ 110
fragrans, Koen. ... ... „ 111
longiflora, Roxb. ... ... „ 111
longispina, Roxb. ... ... „ 110
nutans, Roxb. ... ... „ 110
rigida, Wall. ... ... „ 109

Posoqueria Vol. Page
uliginosa, Roxb. ... iii. 110
Potamochloa Retzii, Griff. ... vii. 95
Potamogeton, *Linn.* ... vi. 565
crenulatus, D. Don ... „ 566
crispus, *Linn.* ... „ 566
digynus, Wall. ... „ 566
elegans, Wall. ... „ 566
flabellatus, Bab. ... „ 567
flabellatus, Hk. f. ... „ 567
heterophyllus, Ham. ... „ 566
hybridus, Mich. ? ... „ 566
indicus, *Roxb.* ... „ 565
indicus, Roth ... „ 564
javanicus, *Hassk.* ... „ 566
lucens, *Linn.* ... „ 567
lucens, Ham. ... „ 567
malaianus, Miq. ... „ 567
marinus ? Ham. ... „ 567
mucronatus, *Presl* ... „ 567
natans, *Linn.* ... „ 565
natans, Thw. ... „ 565
oblongus, *Viv.* ... „ 566
parvifolius, Buch. ... „ 566
pectinatus, *Linn.* ... „ 567
perfoliatus, *Linn.* ... „ 566
polygonifolius, Pourr. ... „ 566
pusillus, *Linn.* ... „ 567
Roxburghianus, Schult. f. „ 565
rufescens, Aitch. ... „ 565
tenuicaulis, F. Muell. .. „ 566
tuberosus, Roxb. ... „ 566
Potentilla, *Linn.* ... ii. 345
adnata, Wall. ... „ 343
alba, Linn. ... „ 358
albifolia, *Wall.* ... „ 347
alpestris, Hk. f. & T. ... „ 357
altaica, Bunge ... „ 354
ambigua, *Camb.* ... „ 348
amurensis, Maxim. ... „ 359
anserina, *Linn.* ... „ 350
Arbuscula, D. Don ... „ 347
argentea, *Linn.* ... „ 356
argyrophylla, *Wall.* ... „ 356
argyrophylla, Wall. ... „ 357
Atropos, *Hoffm.* ... „ 360
atrosanguinea, Lodd. ... „ 357
axilliflora, *Hk. f.* ... „ 346
bannehalensis, Camb. ... „ 350
barbata, Wall. ... „ 349
bidens, Bertol. ... „ 353
biflora, Willd. ... „ 348
bifurca, *Linn.* ... „ 353
bifurcata, Wall. ... „ 355
breviscissa, Bertol. ... „ 354
cæspitosa, Lehm. ... „ 358
cana, Wall. ... „ 359
Candolleana, Royle ... „ 360

Potentilla Vol. Page
cataclines, Lehm. ... ii. 357
Cautleyana, Royle ... „ 357
cicutariæfolia, Willd. ... „ 359
cinerascens, Bertol. ... „ 354
Clarkei, *Hk. f.* ... „ 351
coccinea, Hoffm. ... „ 355
colorata, Lehm. ... „ 355
commutata, Lehm. ... „ 353
coriandrifolia, D. Don ... „ 353
cryptantha, Klotz. ... „ 358
cuneata, Wall. ... „ 348
cuneifolia, Bertol. ... „ 348
curviseta, *Hk. f.* ... „ 358
denticulata, Ser. ... „ 359
denticulosa, Ser. ... „ 343
desertorum, *Bunge* ... „ 355
discolor, Bunge ... „ 351
discolor, Camb. ... „ 348
doubjonneana, *Camb.* ... „ 357
Durandii, Torr. & Gr. ... „ 343
eriocarpa, *Wall.* ... „ 348
formosa, D. Don ... „ 355
fragariæfolia, Klotz. ... „ 343
fragarioides, *Linn.* ... „ 350
fragiformis, Willd. ... „ 357
fruticosa, *Linn.* ... „ 347
fulgens, *Wall.* ... „ 349
gelida, *C. A. Meyer* ... „ 357
Gerardiana, Wall. ... „ 350
glauca, Camb. ... „ 353
gracilis, Wall. ... „ 359
Grahamiana, Wight ... „ 350
grandiflora, Hk. f. & T. ... „ 357
Griffithii, *Hk. f.* ... „ 351
Gul. Waldmeri, Klotz. ... „ 355
Heynii, Roth ... „ 359
hirta, Linn. ... „ 356
hololeuca, Boiss. ... „ 354
Inglisii, Royle ... „ 348
insignis, Royle ... „ 357
Jacquemontiana, Camb. ... „ 357
kashmirica, *Hk. f.* ... „ 355
Kleiniana, *W. & A.* ... „ 359
Kotschyana, Fenzl ... „ 355
Leschenaultiana, *Ser.* ... „ 350
leucochroa, Lindl. ... „ 357
leuconota, *D. Don* ... „ 352
leuconota, Wall. ... „ 351
Lindenbergii, Lehm. ... „ 348
lineata, Trevir. ... „ 349
meifolia, Wall. ... „ 353
microphylla, *D. Don* ... „ 352
microphylla, Royle ... „ 353
microphylla, Wall. ... „ 352
monanthes, *Lindl.* ... „ 358
Mooniana, *Wight* ... „ 349
Moorcroftii, Wall. ... „ 353

Potentilla ... Vol. Page
multifida, *Linn.* ... ... ii. 353
Munroana, Lehm. ... ... „ 350
Naspata, Ham. ... ... „ 349
nepalensis, *Hook.* ... ... „ 355
nivea, *Linn.* ... ... „ 358
obovata, Bertol. ... ... „ 359
ochreata, Lindl. ... ... „ 347
peduncularis, *D. Don* ... „ 351
pennsylvanica, Linn. ... „ 354
perpusilla, *Hk. f.* ... ... „ 346
polyphylla, Wall. ... ... „ 349
polyschista, Boiss. ... ... „ 354
procumbens, Clairv. ... ... „ 345
Pseudo-anserina, Bertol. „ 350
pteropoda, *Royle* ... ... „ 356
pteropoda, Hoffm. ... ... „ 360
purpurea, *Hk. f.* ... ... „ 347
reptans, *Linn.* ... ... „ 356
reticulata, Bertol. ... ... „ 347
rigida, Wall. ... ... „ 347
ruthenia? Hb. Ham. ... „ 359
Saxifraga, Ard. ... ... „ 358
Salessovii, *Steph.* ... ... „ 348
Saundersiana, Royle ... „ 354
sericea, *Linn.* ... ... „ 354
Sibbaldi, *Haller, f.* ... ... „ 345
Sibbaldia, Griess. ... ... „ 346
Siemersiana, Lehm. ... „ 349
soongarica, Bunge ... ... „ 354
sordida, Klotz. ... ... „ 349
splendens, Wall. ... ... „ 349
supina, *Linn.* ... ... „ 359
tenella, Turcz. ... ... „ 354
tetrandra, *Hk. f.* ... ... „ 346
tridentata, Linn. ... ... „ 358
trifida, Lehm. ... ... „ 343
trullifolia, *Hk. f.* ... ... „ 345
variabilis, Klotz. ... ... „ 350
velutina, Wall. ... ... „ 351
verticillaris, Steph. ... ... „ 354
vestita, Klotz. ... ... „ 357
Wallichiana, Govan ... „ 357
Wallichiana, Ser. ... ... „ 343
Wallichiana, Wall. ... ... „ 359
sp., Clarke ... ... „ 360
sp., Hk. f. & T. ... ... „ 351
POTENTILLEÆ ... ... ii. 307
POTERIEÆ ... ... ii. 308
Poterium, *Linn.* ... ... ii. 362
diandrum, *Hk. f.* ... ... „ 362
filiforme, *Hk. f.* ... ... „ 362
indicum, *Gardn.* ... ... „ 362
longifolium, *Hk. f.* ... ... „ 363
Sanguisorba, *Linn.* ... ... „ 363
Pothomorphe subpeltata, Miq. v. 95
Pothos, *Linn.* ... ... vi. 551
angustifolius, *Presl* ... ... „ 552

Pothos ... Vol. Page
Barberianus, *Schott* ... vi. 553
bifarius, Wall. ... ... „ 555
Cathcarti, *Schott* ... „ 552
caudatus, Roxb. ... ... „ 549
cognatus, Schott ... ... „ 552
Curtisii, *Hk. f.* ... ... „ 554
decipiens, Schott ... ... „ 552
decurrens, Wall. ... vi. 547, 549
decursiva, Roxb. ... ... vi. 547
decursiva, Wall. ... ... „ 549
elegans, Wall. ... ... „ 540
elliptica, Moon ... ... „ 555
exiguiflorus, Schott ... ... „ 552
fallax, Schott ... ... „ 552
giganteus, Roxb. ... ... „ 548
glaucus, Wall. ... ... „ 547
gracilis, Schott ... ... „ 553
heterophyllus, Roxb. ... „ 550
Hookeri, *Schott* ... ... „ 552
Junghuhnianus, de Vriese „ 553
Kingii, *Hk. f.* ... ... „ 553
Kunstleri, *Hk. f.* ... ... „ 554
lancifolius, *Hk. f.* ... ... „ 554
Lasia, Roxb. ... ... „ 550
latifolius, *Hk. f.* ... ... „ 554
macrocephalus, *Scort.* ... „ 553
macrophyllus, de Vriese... „ 553
Maingayi, *Hk. f.* ... ... „ 554
malayanus, Miq. ... ... „ 540
marginatus, Wall. ... ... „ 540
obliquus, Wall. ... ... „ 555
officinalis, Roxb. ... ... „ 541
officinalis, Wall. ... ... „ 547
Peepla, Roxb. ... ... „ 545
Peepla, Wall. ... ... „ 546
pertusus, Roxb. ... ... „ 547
pinnatifidus, Roxb. ... ... „ 549
pinnatus, Wall. .. ... „ 540
remotiflorus, *Hook.* ... v. 96, vi. 555
Roxburghii, de Vriese ... vi. 552
Roxburghii, Schott ... ... „ 552
scandens, *Linn.* ... ... „ 551
scandens, D. Don ... ... „ 552
scandens, Hook. ... ... „ 552
scandens, Wall. ... ... „ 552
spinosa, Ham. ... ... „ 550
tenera, Wall. ... ... „ 553
Thomsonianus, *Schott* ... „ 555
ventricosus, Wall. ... ... „ 543
Vriesianus, *Schott* ... ... „ 552
Wallichii, *Hk. f.* ... ... „ 553
Pottsia, *Hook. & Arn.* ... ... iii. 652
cantonensis, *Hook. & Arn.* „ 652
Hookeriana, Wight ... ... „ 652
ovata, A. DC. ... ... „ 652
Poupartia mangifera, Bl. ... ii. 43
pinnata, Blanco ... ... „ 43

Vol. Page
Pourthiæa, *Dcne.* ... ... ii. 382
arguta, *Dcne.* ... ... ,, 382
Hookeri, Dcne. ... ... ,, 382
salicifolia, Dcne ... ... ,, 382
Pouzolzia, *Gaud.* ... ... v. 580
acuta, Wight ... ... ,, 584
alienata, Gaud. ... ... ,, 581
ambigua, Wight ... ... ,, 584
angustifolia, Wight ... ... ,, 581
aspera, Wight ... ... ,, 584
auriculata, *Wight* ... ... ,, 582
Bennettiana, *Wight* ... ,, 585
bicuspidata, Wight ... ... ,, 582
borbonica, Wight ... ... ,, 581
bracteata, Benn. ... ... ,, 585
caudata, *Benn.* ... ... ,, 585
concinna, Wight ... ... ,, 584
confinis, Bl. ... ... ,, 587
courtallensis, Wight ... ,, 585
cymosa, Wight ... ... ,, 582
Dalzellii, Wight ... ... ,, 583
diffusa, Wight ... ... ,, 582
elliptica, Wight ... ... ,, 582
Gardneri, Bl. ... ... ,, 586
Gardneri, Wight ... ... ,, 586
glomerata, Hassk. ... ... ,, 581
heterocarpa, Wight ... ... ,, 585
heterophylla, Bl. ... ... ,, 581
hirta, *Hassk.* ... ... ,, 586
hispida. Benn. .. .. ,, 586
Huegeliana, Bl. ... ... ,, 585
indica, *Gaud.* ... ... ,, 581
integrifolia, *Dalz.* ... ... ,, 587
integrifolia, Dalz. ... ... ,, 583
Johnsoniana, Wight ... ,, 581
longifolia, Wight ... ... ,, 584
microphylla, Wight ... ... ,, 582
minor, Wight ... ... v. 581, 588
mysorensis, Wight ... ... v. 586
neilghirensis, Wight ... ,, 584
oblongifolia, Wight ... ... ,, 584
obscura, Bl. ... ... ,, 586
orientalis, Wedd. ... ... ,, 588
ovalifolia, Wight ... ... ,, 586
ovalis, Miq. ... ... ,, 581
ovata, Wight ... ... ,, 584
parva, Bl. ... ... ,, 581
parvifolia, Wight ... ... ,, 587
pauciflora, A. Rich. ... ., 593
pentandra, *Benn.* ... ... ,, 583
pentandra, Roxb. ... ... ,, 583
pilosa, Wight ... ... ,, 581
procumbens, Wight ... ... ,, 581
propinqua, Bl. ... ... ,, 582
pyramidata, Wight ... ... ,, 581
quadrialata, Wight ... v. 585, 586
quinquenervis, Benn. ... v. 586

Pouzolzia Vol. Page
quinquenervis, Benth. ... v. 586
ramosissima, Wight ... ,, 583
Rheedii, Wight ... ... ,, 582
rostrata, Wight ... ... ,, 582
Rothiana, Bl. ... ... ,, 588
rotundifolia, Wight ... ,, 582
scabra, *Wight* ... ... ,, 584
scabrida, Wight ... ... ,, 582
Sonneratii, Gaud. ... ... ,, 580
sponiæfolia, Schlecht. ... ,, 585
Stocksii, Wight ... ... ,, 583
suffruticosa, Wight ... ... ,, 581
tenuis, Bl. ... ... ,, 581
ternata, Benn. ... ... ,, 584
tetraptera, Wight ... ... ,, 581
tomentosa, Wight ... ... ,, 586
trialata, Wight... ... ... ,, 584
triandra, Bl. ... ... ,, 587
trichophora, Hohen. ... ,, 581
tuberosa, *Wight* ... ... ,, 582
vesicaria, *Wight* ... ... ,, 582
viminea, *Wedd.* ... ... ,, 581
Walkeriana, Wight ... ... ,, 583
Wallichiana, Wight ... ,, 584
Wightii, *Benn.* ... ... ,, 584
zeylanica, Benn. ... ... ,, 581
Prainea, *King* ... ... v. 546
scandens, *King* ... ... ,, 547
Prangos, *Lindl.* ... ... ii. 695
pabularia, *Lindl.* ... ... ,, 695
PRASIEÆ ... ... iv. 607
Prasium melissifolium, Roxb. iv. 698
Pratia, *Gaud.* ... ... iii. 422
begonifolia, *Lindl.* ... ... ,, 422
montana, *Hassk.* ... ... ,, 423
Nummularia, Kurz ... ,, 422
radicans, G. Don ... ... ,, 425
Thunbergii, G. Don ... ... ,, 425
zeylanica, Hassk. ... ... ,, 422
Premna, *Linn.* ... ... iv. 571
amplectens, *Wall.* ... ... ,, 580
angustata, Wall. ... ... ,, 580
arborea, Roth ... ... ,, 581
barbata, *Wall.* ... ... ,, 579
bengalensis, *Clarke*... ... ,, 577
bracteata, *Wall.* ... ... ,, 572
cana, Wall. ... ... ,, 579
ceramensis, Miq. ... ... ,, 575
cordifolia, *Roxb.* ... ... ,, 572
cordifolia, Brandis ... ... ,, 574
cordifolia, Grah. ... ... ,, 573
cordifolia, Wall. ... ... ,, 572
cordifolia, Wight ... ... ,, 573
coriacea, *Clarke* ... ... ,, 573
corymbosa, *Rottl.* & *Willd.* ... ... ,, 573
densiflora, Wall. ... ... ,, 573

Premna ... Vol. Page
divaricata, *Wall.* ... iv. 575
esculenta, *Roxb.* ... „ 580
flavescens, *Ham.* ... „ 578
flavescens, Juss. ... „ 576
grossa, *Wall.* ... „ 581
herbacea, *Roxb.* ... „ 581
integerrima, *Wight* ... „ 577
integrifolia, *Linn.* ... „ 574
interrupta, *Wall.* ... „ 572
khasiana, *Clarke* ... „ 575
latifolia, *Roxb.* ... iv. 574, 577
latifolia, Thw. ... „ 576
latifolia, Wight ... „ 578
longifolia, *Roxb.* ... „ 575
longifolia, Wall. ... „ 577
lucidula, Kurz ... „ 575
macrophylla, *Wall.* ... „ 580
micrantha, *Schau.* ... „ 578
micrantha, Thw. ... „ 579
milleflora, *Clarke* ... „ 576
mollissima, Roth ... „ 578
mucronata, Roxb. ... „ 578
ovalifolia, Wall. ... „ 574
parasitica, *Bl.* ... „ 574
Perrottetii, Clarke ... „ 572
pinguis, *Clarke* ... „ 579
procumbens, *Moon* ... „ 580
pubescens, Bl. ... „ 577
punctulata, *Clarke* ... „ 575
punduana, *Wall.* ... „ 577
purpurascens, *Thw.* ... „ 574
pygmæa, Wall. ... „ 581
pyramidata, *Wall.* ... „ 576
racemosa, *Wall.* ... „ 571
racemosa, Gamble ... „ 572
ramosa, Wall. ... „ 573
Roxburghiana, Wall. ... „ 581
sambucina, Wall. ... „ 574
scandens, *Roxb.* ... „ 573
scandens, Brandis ... „ 574
scandens, Dalz. & Gibs. ... „ 573
scandens, Wall. ... iv. 573, 578
serratifolia, Linn. ... iv. 574
spinosa, Roxb. ... „ 574
subcordata, Turcz. ... „ 574
thyrsiflora, Heyne ... „ 578
thyrsoidea, *Wight* ... „ 579
Thwaitesii, *Clarke* ... „ 579
tomentosa, *Willd.* ... iv. 138, 576
tomentosa, Bl. ... iv. 577
tomentosa, Kurz ... „ 576
tomentosa, Miq. ... „ 581
tomentosa, Roxb. ... „ 576
trichostoma, Miq. ... „ 575
truncata, Turcz. ... „ 573
viburnoides, Kurz ... „ 578
viburnoides, Wall. ... iv. 574, 578

Premna ... Vol. Page
villosa, *Clarke* ... iv. 573
Wightiana, *Schau.* ... „ 578
Wightiana, Bedd. ... „ 579
sp. Hk. f. & T. ... iv. 573, 575, 576, 577, 578, 579
? *sp.* Wall ... iv. 581
Prenanthes, *Linn.* ... iii. 411
acaulis, Roxb. ... „ 396
alata, Hk. f. & T. ... „ 412
alata, Hk. f. ... „ 412
alliariæfolia, DC. ... „ 412
aspleniifolia, Willd. ? ... „ 415
Brunoniana, *Wall.* ... „ 411
Brunoniana, DC. ... „ 412
? *Candolleana*, Wall. ... iii. 388, 397
dichotoma, Wall. ... „ 415, 416
diversifolia, Ledeb. ... iii. 395
glabra, Heyne ... „ 396
glomerata, Dcne. ... „ 398
graciliflora, Wall. ... „ 406
hispidula, DC. ... „ 412
Hookeri, *Clarke* ... „ 412
japonica, Linn. ... „ 395
khasiana, *Clarke* ... „ 411
lævigata, Bl. ... „ 411
lævigata, Wall. ... „ 408
napifolia, Wall. ... „ 395
obtusa, Ham. ... „ 416
patens, Wall. ... iii. 403, 416
Poosia, Wall. ... iii. 395
procumbens, Roxb. ... „ 416
? *quinqueloba*, Wall. ... „ 354
racemosa, Roxb. ... „ 403
raphanifolia, DC. ... „ 412
rigida, Ham. ... „ 396
rostrata, Bl. ... „ 406
sarmentosa, Wall. ... „ 336
sarmentosa, Willd. ... „ 417
scandens, *Hk. f. & T.* ... „ 413
sikkimensis, *Hk. f.* ... „ 412
sonchifolia, Heyne ... „ 403
squarrosa, Thunb. ... „ 405
striata, Bl. ... „ 395
taraxacoides, Wall. ... „ 403
violæfolia, *Dcne.* ... „ 412
sp. Griff. ... „ 396
Preptanthe vestita, Rchb. f. v. 852
Primula, *Linn.* ... iii. 482, 672
altissima, D. Don ... iii. 484
bellidifolia, *King* ... „ 486
capitata, *Hook.* ... „ 486
cachemiriana, Munro ... „ 486
Clarkei, *Watt* ... „ 484
concinna, *Watt* ... „ 487
cortusoides, Linn. ... „ 485
denticulata, *Sm.* ... „ 485
denticulata, Wight ... „ 488

Primula Vol. Page
Dickieana, *Watt* ... ... iii. 491
elegans, Duby ... ... ,, 489
Elwesiana, *King* ... ... ,, 492
elliptica, *Royle* ... ... ,, 488
elongata, *Watt* ... ... ,, 490
erosa, *Wall.* ... ... ,, 486
farinosa, *Linn.* ... ... ,, 486
filipes, *Watt* ... ... ,, 485
floribunda, *Wall.* ... ... ,, 495
Gambeliana, *Watt* ... ... ,, 483
geraniifolia, *Hk. f.* ... ... ,, 484
glabra, *Klatt* ... ... ,, 487
globifera, Griff. ... ... ,, 486
Heydei, *Watt* ... ... ,, 487
Hoffmeisteri, Klotz. ... ... ,, 485
Hookeri, *Watt* ... ... ,, 494
humilis, Steud. ... ... ,, 492
imperialis, *Jungh.* ... ... ,, 489
involucrata, *Wall.* ... ... ,, 488
Jæschkiana, Kern. ... ... ,, 490
japonica, A. Gray ... ... ,, 489
Kauffmanniana, Regel ... ,, 485
Kingii, *Watt* ... ... ,, 491
Listeri, *King* ... ... ,, 485
macrophylla, D. Don ... ,, 490
magellanica, Lehm. ... ... ,, 487
minutissima, *Jacq.* ... ... ,, 494
mollis, *Hook.* ... ... ,, 484
Moorcroftiana, Wall. ... ,, 490
Munroi, Lindl. ... ... ,, 488
muscoides, *Hk. f.* ... .. ,, 494
nana, Wall. ... ... ,, 493
obconica, Hance ... ... ,, 485
obovata, Wall. ... ... ,, 495
obtusifolia, *Royle* ... ... ,, 489
odontophylla, Wall. ... ... ,, 483
petiolaris, *Wall.* ... ... ,, 493
poculiformis, Hk. f. ... ... ,, 485
prolifera, *Wall.* ... ... ,, 489
pulchra, *Watt* ... ... ,, 483
purpurea, Royle ... ... ,, 490
pusilla, *Wall.* ... ... ,, 492
reptans, *Hk. f.* ... ... ,, 494
reticulata, *Wall* ... ... ,, 483
rosea, *Royle* ... ... ,, 488
rotundifolia, *Wall.* ... ... ,, 483
sapphirina, *Hk. f. & T.* ... ,, 492
Saundersiana, Royle ... ,, 494
sessilis, Royle ... ... ,, 493
sibirica, *Jacq.* ... ... ,, 487
sikkimensis, *Hk. f.* ... ... ,, 491
simensis, Hochst. ... ... ,, 495
soldanelloides, *Watt* ... ,, 493
spathulacea, Jacquem. ... ,, 488
speciosa, D. Don ... ... ,, 484
Stirtoniana, *Watt* ... ... ,, 495
Stracheyi, Hk. f. ... ... ,, 494

Primula Vol. Page
Stuartii, *Wall.* ... ... iii. 490
tenella, *King* ... ... ,, 492
tibetica, *Watt* ... ... ,, 488
tridentata, D. Don ... ... ,, 493
uniflora, *Klatt* ... ... ,, 492
vaginata, *Watt* ... ... ,, 484
verticillata, Forsk. ... ... ,, 495
Wattii, *King* ... ... ,, 672
sp. Griff. ... ... ,, 485
PRIMULACEÆ ... ... iii. 482
PRIMULEÆ ... ... iii. 482
Prinos cymosa, Hassk. ... i. 605
spicata, Miq. ... ... ,, 598
Prinsepia, *Royle* ... ... ii. 322
utilis, *Royle* ... ... ,, 323
Prionachne Ecklonii, Nees vii. 10
Prionanthium, Desv. ... ... vii. 10
Prionitis Hystrix, Miq. ... iv. 482
pubiflora, Miq. ... ... ,, 482
Prionostachys ensifolia, Hassk. vi. 379
herbacea, Hassk. ... .. ,, 377
terminalis, Hassk. ... ... ,, 379
Priotropis, *W. & A.* ... ... ii. 65
cytisoides, *W. & A.* ... ,, 65
Prismatocarpus littoralis, Wall. ... ... i. 615
Prismatomeris, *Thw.* ... ... iii. 159
albidiflora, *Thw.* ... ... ,, 159
Fergussonii, *Thw.* ... ... ,, 159
Pristidia divaricata, Thw. ... iv. 91
Priva, Adans. ... ... iv. 565
abyssinica, Meyer ... ... ,, 565
Forskalii, Meyer ... ... ,, 565
leptostachya, *Juss.* ... ... ,, 565
Procris, *Juss.* ... ... v. 575
acuminata, Poir. ... ... ,, 566
approximata, Wall ... ... ,, 568
australis, Spreng. ... ... ,, 563
diversifolia, Wall. ... ... ,, 572
elegans, Wall. ... ... v. 572, 573
ficoidea, Wall. ... ... v. 563
frutescens, *Bl.* ... ... ,, 575
gibbosa, Wall. ... ... ,, 560
Heyneana, Wall. ... ... ,, 561
integrifolia, D. Don ... ,, 564
læta, Wall. ... ... ,, 572
lævigata, *Bl.* ... ... ,, 575
membranacea, Reinw. ... ,, 566
mollis, Wall. ... ... ,, 564
? *monandra*, Ham. ... ... ,, 572
nivea, Gaud. ... ... ,, 577
obtusa, Royle ... ... ,, 559
peduncularis, Wall. ... v. 559, 569
piperifolia, Wall. ... ... v. 564
polycephala, Wall. ... ... ,, 564
punctata, Ham. ... ... ,, 564
punctata, Wall. ... v. 564, 565

Procris Vol. Page
racemosa, Royle ... ... v. 555
rupestris, Ham. ... ... ,, 564
sesquifolia, Reinw. ... ... ,, 564
sessilis, Hook. & Arn. ... ,, 563
Wightiana, Wall. ... ... ,, 575
Prosopis, *Linn.* ... ... ii. 287
spicata, Burm. ... ... ,, 288
spicigera, *Linn.* ... ... ,, 288
Stephaniana, *Kunth* ... ,, 288
Prosorus cyanosperma, Thw. v. 305
Gaertneri, Thw. ... ... ,, 305
indica, Dalz. ... ... ,, 305
indica, Thw. ... ... ,, 305
PROTEACEÆ ... ... v. 189
Protium, *W. & A.* ... ... i. 530
caudatum, *W. & A.* ... .. ,, 530
gileadense, W. & A. ... ... ,, 530
pubescens, *W. & A.* ... ,, 530
Roxburghiana, W. & A. ... ,, 530
PRUNEÆ ... ... ii. 307
Prunella, Linn. ... ... iv. 670
indica, Burm. ... ... ,, 611
Prunus, *Linn.* ... ... ii. 312
acuminata, *Hk. f.* ... ... ,, 317
adenophylla, Wall. ... ... ,, 316
Aloochao, Royle ... ... ,, 315
Amygdalus, Baill. ... ... ,, 313
armeniaca, Linn. ... ... ,, 313
Avium, Linn. ... ... ,, 313
bokhariensis, Royle ... ... ,, 315
caproniana, DC. ... ... ,, 313
cerasoides, D. Don ... ... ,, 314
Cerasus, Linn. ... ... ,, 313
communis, *Huds.* ... ... ,, 315
ferruginea, Wall. ... ... ,, 314
humilis, Bunge ... ... ,, 314
insititia, Linn. ... ... ,, 315
Jacquemontii, *Hk. f.* ... ,, 314
javanica, Miq. ... ... ,, 316
Jenkinsii, *Hk. f. & T.* ... ,, 317
Junghuhniana, Miq. ... ... ,, 317
Mahaleb, Linn. ... ... ,, 312
martabanica, *Kurz.* ... ... ,, 316
nepalensis, *Koch* ... ... ,, 316
Padus, *Linn.* ... ... ,, 315
persica, Benth. & Hk. f. ... ,, 313
prostrata, *Labill.* ... ... ,, 313
Puddum, *Roxb.* ... ... ,, 314
punctata, *Hk. f. & T.* ... ,, 317
rufa, *Steud.* ... ... ,, 314
sylvatica, Roxb. ... ... ,, 314
tomentosa, *Thunb.* ... ... ,, 314
trichocarpa, Bunge ... ... ,, 314
triflora, *Roxb.* ... ... ,, 315
undulata, *Ham.* ... ... ,, 316
Psammanthe marina, Hance ii. 659
Psammogeton, *Edgew.* ... ii. 719
Psammogeton Vol. Page
biternatum, *Edgew.* ... ii. 719
brevisetum, Boiss. ... ... ,, 720
crinitum, Boiss. ... ... ,, 719
setifolium, Boiss ... ... ,, 720
Pseudanthistiria, *Hk. f.* vii. 219, 421
burmanica, *Hk. f.* ... ... vii 220
heteroclita, *Hk. f.* ... ... ,, 219
hispida, *Hk. f.* ... ... ,, 219
umbellata, *Hk. f.* ... ... ,, 220
Pseudanthus brachiatus, Wight ... ... iv. 726
Pseudarthria, *W. & A.* ... ii. 153
capitata, Hassk. ... ... ,, 171
gyrans, Hassk. ... ... ,, 174
polycarpa, Hassk. ... ... ,, 175
viscida, *W. & A.* ... ... ,, 154
Pseudehretia umbellata, Turcz i. 604
Pseudivora? auriculata, Miq. iii. 108
javanica, Miq. ... ... ,, 111
truncata, Miq. ... ... ,, 94
Zollingeriana, Miq. ... ... ,, 111
Pseudobarleria cærulea, Oerst. iv. 489
polytricha, Oerst. ... ... ,, 490
Pseudoraphis Brunoniana, Griff. ... ... vii. 62
Pseudoryza ciliata, Griff. ... vii. 94
PSEUDOSOLANEÆ ... ... iv. 246
Pseudostachyum, *Munro* ... vii. 409
compactiflorum, Kurz ... ,, 409
Helferi, Kurz ... ... ,, 411
polymorphum, *Munro* ... ,, 409
Pseudostreblus, *Bureau* ... v. 487
indica, *Bureau* ... ... ,, 487
Pseuduvaria reticulata, Miq. i. 77
Psidium, *Linn.* ... ... ii. 467
Guyava, *Linn.* ... ... ,, 468
pyriferum, Linn. ... ... ,, 468
pomiferum, Linn. ... ... ,, 468
Psilæa dalbergioides, Miq. ... v. 198
Psilobium capillare, Kurz ... iii. 121
Psilopogon Figarei, De Not. vii. 147
Schimperi, Hochst. ... ... ,, 147
Psilostachys, *Hochst.* ... ... iv. 726
sericea, *Hk. f.* ... ... ,, 726
Psilostachys, Steud. ... ... vii. 104
filiformis, Dalz. & Gibs. ... ,, 104
Hohenackeri, Steud. ... ... ,, 104
Psilotrichum, *Bl.* ... ... iv. 724
calceolatum, *Moq.* ... ... ,, 725
ferrugineum, *Moq.* ... ... ,, 725
nudum, *Moq.* .. .. ,, 724
nudum, Wight ... ... ,, 725
sceleranthum, *Thw.* ... ... ,, 725
sericeum, Dalz. ... ... ,, 726
trichotomum, *Bl.* ... ... ,, 725
Psophocarpus, *Neck.* ... .. ii. 211
longepedunculatus, Hassk. ,, 212

Psophocarpus Vol. Page
palmettorum, Guill. & Perr. ii. 212
palustris, *Desv.* „ 212
tetragonolobus, *DC.* „ 211
Psoralea, *Linn.* ii. 103
corylifolia, *Linn.* „ 103
plicata, *Delile* „ 103
tetragonoloba, Linn. „ 92
Psychotria, *Linn.* iii. 161
adenophylla, *Wall.* „ 164
ambigua, W. & A. „ 176
ampla, Wall. „ 176
anamallayana, *Bedd.* „ 171
andamanica, *Kurz* „ 168
angulata, *Korth.* „ 172
asiatica, Linn. „ 176
asiatica, Wall. „ 173
aurantiaca, Wall. „ 165
bisulcata, *W. & A.* „ 171
bracteata, W. & A. „ 163
Brownii, Spreng. „ 176
calocarpa, *Kurz* „ 173
? *Chloranthus*, Ham. „ 174
congesta, *W. & A.* „ 162
connata, *Wall.* „ 171
connata, Kurz „ 164
curviflora, Wall. „ 176
Dalzellii, *Hk. f.* „ 163
denticulata, *Wall.* „ 173
divergens, *Kurz* „ 168
Dodda-Jervam, Schlecht. „ 171
elliptica, Ker „ 168
elongata, *Hk. f.* „ 163
? *elongata*, Bedd. „ 162
erratica, *Hk. f.* „ 168
expansa, Bl. „ 165
filipes, *Hk. f.* „ 170
fulva, *Ham.* „ 169
fulva, Wall. „ 174
Gardneri, *Hk. f.* „ 161
glandulifer, *Thw.* „ 161
Griffithii, *Hk. f.* „ 177
Helferiana, *Kurz* „ 172
herbacea, Linn. „ 178
Heyneana, Wall. iii. 162, 163
Jackii, *Hk. f.* iii. 167
Johnsoni, *Hk. f.* „ 175
lævigata, W. & A. „ 171
longifolia, Dalz. „ 177
longipetiolata, *Thw.* „ 170
lurida, Bl. „ 176
macrocarpa, *Hk. f.* „ 162
madraspatana, *Hk. f.* „ 167
Maingayi, *Hk. f.* „ 166
malayana, *Jack* „ 165
microcarpa, Wall. „ 169
montana, *Bl.* „ 174
monticola, Kurz „ 169

Psychotria Vol. Page
Moonii, *Hk. f.* iii. 170
morindæflora, *Wall.* „ 166
nervosa, D. Don „ 175
nicobarica, *Kurz* „ 172
nudiflora, *W. & A.* „ 175
obesa, Wall. iv. 92
obovata, Wall. iii. 165, 166
ophioxyloides, Wall. iii. 176
ovoidea, *Wall.* „ 166
oxyphylla, Wall. iii. 176, iv. 91
penangensis, *Hk. f.* iii. 175
pendula, *Hk. f.* „ 164
picta, Wall. „ 173
platyneura, *Kurz* „ 164
plurivenia, *Thw.* „ 170
polycarpa, *Hk. f.* „ 165
polyneura, DC. „ 174
polyneura, Kurz „ 175
Reevesii, Wall. „ 168
rostrata, Bl. „ 177
sarmentosa, *Bl.* „ 165
scandens, Moon „ 165
silhetensis, *Hk. f.* „ 174
sordida, *Thw.* „ 170
sphærocarpa, *Wall.* „ 176
stenophylla, *Hk. f.* „ 161
stipulacea, *Wall.* „ 167
sulcata, *Wall.* „ 168
subintegra, *Hk. f.* „ 162
symplocifolia, *Kurz* „ 172
tabacifolia, Wall. „ 174
tetrandra, Bl. „ 176
Thomsoni, *Hk. f.* „ 173
Thwaitesii, *Hk. f.* „ 162
tortilis, *Bl.* „ 169
truncata, *Wall.* „ 163
tylophora, *Kurz* „ 164
vaginans, *Hk. f.* „ 176
? *vaginans*, DC. iii. 176, iv. 91
viminea, Wall. iv. 91
viridiflora, Reinw. iii. 173
viridissima, Kurz. „ 174
Wallichiana, *DC.* „ 175
Wightiana, *Hk. f.* „ 167
sp., Hk. f. & T. iii. 172, 173, 174
sp., Miq. iii. 166
sp., Wall. iii. 79, 81, 86, 108, 112, 160, 163, 166, 167, 169, 172, 173, 174, 175, 176, 177, 192, iv. 91, 92
PSYCHOTRIEÆ iii. 21, 161
Psydrax dicoccos, Gaertn. iii. 132
Ptelea viscosa, Linn. i. 697
Pteleocarpa, *Oliv.* i. 591
malaccensis, *Oliv.* „ 591
PTERANTHEÆ iv. 712
Pteridophyllum decipiens, Thw. i. 539

Vol. Page
Pterilema acerifolium, Reinw. v. 596
Pterisanthes, *Bl.* ... ... i. 663
cissoides, *Bl.* ... ... „ 664
heterantha, *Laws.* ... ... „ 664
pedata, *Laws.* ... ... „ 664
polita, *Miq.* ... ... „ 663
Pterium elegans, Desv. ... vii. 307
Pternandra, *Jack* ... ... ii. 551
cærulescens, *Jack* ... ... „ 551
capitellata, *Jack* ... ... „ 551
echinata, Jack ... ... „ 552
echinata, Wall. ... ... „ 552
latifolia, Triana ... ... „ 551
paniculata, *Benth.* ... ... „ 551
Pterocarpus, *Linn.* ... ... ii. 238
bilobus, Roxb. ... ... „ 239
dalbergioides, Roxb. ... „ 238
indicus, *Willd.* ... ... „ 238
macrocarpus, *Kurz* ... ... „ 239
Marsupium, *Roxb.* ... ... „ 239
santalinus, *Linn. f.* ... ... „ 239
Wallichii, W. & A. ... ... „ 238
Pterocaulon, *Elliott* ... ... iii. 275
Billardieri, F. Muell. ... „ 275
cylindrostachyum, *Clarke* „ 275
Pteroceras, Hasselt. ... ... vi. 33
Pterochilus plantagineus, Hook. & Arn. ... ... v. 688
Pterococcus glaberrimus, Hassk. ... ... v. 464
Pterocyclus angelicoides, Klotz. ... ... ii. 703
Pterocymbium, Br. ... ... i. 362
javanicum, Br. ... ... „ 362
Pterolobium, *R. Br.* ... ... ii. 259
indicum, *A. Rich.* ... ... „ 259
lacerans, Wall. ... ... ii. 256, 259
macropterum, Kurz. ... ... ii. 259
microphyllum, Miq. ... ... „ 259
Pteroloma triquetrum, Benth. ii. 163
Pteropyrum, *J. & S.* ... v. 23
Griffithii, Meissn. ... ... „ 23
Olivieri, *J. & S.* ... ... „ 23
Pterospermum, *Schreb.* ... i. 366
acerifolium, *Willd.* ... ... „ 368
acerifolium, Zoll. & Moritz. „ 367
aceroides, Wall. ... ... „ 368
canescens, Roxb. ... ... „ 367
diversifolium, *Bl.* ... ... „ 367
glabrescens, *W. & A.* ... „ 369
Heyneanum, *Wall.* ... ... „ 369
Jackianum, *Wall.* ... ... „ 367
lanceæfolium, *Roxb.* ... „ 368
Lawianum, Nimmo ... ... „ 369
oblongum, Wall. ... ... „ 367
obtusifolium, *Wight* ... „ 369
reticulatum, *W. & A.*.. .. „ 369
Pterospermum Vol. Page
rubiginosum, *Heyne* ... i. 368
semisagittatum, *Ham.* ... „ 368
suberifolium, *Lamk.* ... „ 367
suberifolium, Willd. ... „ 369
Pterostelma acuminatum, Wight ... ... iv. 53
Pterostigma capitatum, Benth. ... ... iv. 264
macrophyllum, Benth. ... „ 264
ovatum, Benth. ... ... „ 263
spicatum, Benth. ... ... „ 264
strictum, Griff. ... ... „ 263
subrepens, Thw. ... ... „ 263
villosum, Benth. ... ... „ 263
villosum, Thw. ... ... „ 264
Pterotheca, *Cass.* ... ... iii. 398
bifida, Clarke ... ... „ 399
Falconeri, *Hk. f.* ... ... „ 399
Pterygodium sulcatum, Roxb. vi. 107
Pterygostachyum Lehmanni, Nees ... ... vii. 105
Pterygota, Endl. ... ... i. 360
alata, Br. ... ... „ 360
alata, Thw. ... ... „ 361
Roxburghii, Schott. & Endl. „ 360
Ptilagrostis mongholica, Griseb. ... ... vii. 230
Ptilocnema bracteatum, D. Don ... ... v. 846
Ptilonema plumosum, Steud. vii. 284
Ptilotrichum canescens, C. A. Mey. ... ... i. 141
elongatum, C. A. Mey. (lapsu *Pilotrichum*) ... „ 141
Ptilotus ovatus, Moq. ... ... iv. 725
Ptychopyxis, *Miq.* ... ... v. 454
costata, *Miq.* ... ... „ 455
Ptychoraphis, *Becc.* ... ... vi. 413
augusta, *Becc.* ... ... „ 414
singaporensis, *Becc.* ... „ 413
Ptychosperma costata, Miq. vi. 409
disticha, Miq. ... ... „ 408
Kuhlii, Miq. ... ... „ 409
malaiana, Miq. ... ... „ 410
patula, Miq. ... ... „ 411
rupicola, Thw. ... ... „ 413
singaporensis, Becc. ... „ 413
Ptychotis achilleifolia, DC ... ii. 684
Ajowan, DC. ... ... „ 682
anethifolia, DC. ... ... „ 683
coptica, DC. ... ... „ 682
Roxburghiana, DC. ... ... „ 682
sp., Hk. f. & T. ii. 681, 682, 683, 685
sp., Wall. ... ... „ 682
Ptyssiglottis, *T. Anders.* ... iv. 543
radicosa, *T. Anders.* ... „ 544
Pueraria, *DC.* ... ... ii. 197

Vol. Page
Pueraria
brachycarpa, *Kurz* ii. 199
Candollei, *Grah.* „ 197
composita, Grah. „ 198
composita, Wall. „ 198
hirsuta, *Kurz* „ 199
javanica, Benth. „ 199
peduncularis, *Grah.* „ 197
phaseoloides, *Benth.* „ 199
Stracheyi, *Baker* „ 198
stricta, *Kurz* „ 198
subspicata, Benth. „ 199
Thomsoni, *Benth.* „ 198
tuberosa, *DC.* „ 197
Wallichii, *DC.* „ 198
Pulicaria, *Gaertn.* iii. 297
angustifolia, *DC.* „ 299
Boissieri, *Hk. f.* „ 300
crispa, *Benth.* „ 299
dysinterica, *Gaertn.* „ 298
foliolosa, *DC.* „ 298
glaucescens, *J. & S.* „ 300
gnaphalodes, *Boiss.* „ 299
hyderabadensis, DC. „ 298
indica, J. & S. „ 299
sakhiana, Klatt „ 300
saxicola, Edgew. „ 299
Stocksii, *Hk. f.* „ 300
Stocksii, Boiss. „ 299
vulgaris, *Gaertn.* „ 298
Wightiana, *Clarke* „ 298
Punduana volkameriæfolia, Steetz (lapsu *Vernonia*) iii. 240
vulgaris, Steetz (lapsu *Vernonia*) „ 240
Puneeria coagulans, Stocks iv. 240
Punica, *Linn.* ii. 580
Granatum, *Linn.* „ 581
nana, Linn. „ 581
Pupalia, *Juss.* iv. 723
atropurpurea, *Moq.* „ 723
lappacea, *Moq.* „ 724
orbiculata, *Wight* „ 724
prostrata, Mart. „ 723
Putranjiva, *Wall.* v. 336
amblyocarpa, Muell. „ 337
Roxburghii, *Wall.* „ 336
sphærocarpa, Muell. „ 337
zeylanica, *Muell.* „ 337
Pycnarrhena, *Miers* i. 105
mecistophylla, Miers „ 106
planiflora, Hk. f. & T. „ 106
pleniflora, *Miers* „ 106
Pycnocycla, *Lindl.* ii. 694
abyssinica, Hochst. „ 694
glauca, *Lindl.* „ 694
Pycnorhachis, *Benth.* iv. 63
Maingayi, *Hk. f.* „ 63

Vol. Page
Pycnospora, *R. Br.* ii. 153
hedysaroides, *R. Br.* „ 153
nervosa, W. & A. „ 153
Pycreus, *Beauv.* vi. 589
albomarginatus, *Nees* „ 594
angulatus, *Nees* „ 593
Baccha, Nees „ 593
capillaris, *Nees* „ 591
diffusus, Nees „ 596
ferrugineus, *Clarke* „ 593
flavescens, *Nees* „ 589
lævigatus, Nees „ 596
lateralis, Nees „ 596
latespicatus, *Clarke* „ 590
macranthus, Clarke „ 593
mucronatus, Nees „ 596
nitens, *Nees* „ 591
polystachyus, *Beauv.* „ 592
polystachyus, Beauv. „ 609
pumilus, *Nees* „ 591
puncticulatus, *Nees* vi. 593, 610
pygmæus, Nees vi. 596
sanguinolentus, *Nees* „ 590
squarrosus, Nees „ 623
stramineus, *Clarke* „ 589
sulcinux, *Clarke* „ 593
Pygeum, *Gaertn.* ii. 318
acuminatum, *Coleb.* „ 318
acuminatum, Hk. f. & T. „ 319
? *acuminatum*, Wight „ 321
Andersoni, *Hk. f.* „ 320
arboreum, *Endl.* „ 322
arboreum, Endl. „ 320
brevifolium, *Hk. f.* „ 321
capitellatum, *Hk. f.* „ 321
ceylanicum, *Gaertn.* „ 321
ceylanicum, Bedd. „ 319
Gardneri, *Hk. f.* „ 321
glaberrimum, *Hk. f.* „ 319
Griffithii, *Hk. f.* „ 322
Lampongo, Kurz „ 320
lanceolatum, *Hk. f.* „ 319
latifolium, Miq. „ 322
Maingayi, *Hk. f.* „ 319
montanum, *Hk. f.* „ 321
parviflorum, *Teysm. & Binn.* ii. 320, 322
persimile, *Kurz* ii. 320
polystachyum, *Hk. f.* „ 320
Walkerii, Bl. „ 321
Wightianum, *Bl.* „ 319
zeylanicum, Dalz. & Gibs. „ 321
Pyracantha crenulata, Roem. ii. 384
Pyramidantha rufa, Miq. i. 81
Pyrenaria, *Bl.* i. 289
acuminata, *Planch.* „ 290
attenuata, *Seem.* „ 290

Pyrenaria Vol. Page
barringtoniæfolia, *Seem.* i. 290
camelliæflora, *Kurz* ... „ 290
Pyrethrum Athanasia, Bess. iii. 318
indicum, DC. ... ... „ 314
indicum, Roxb. ... ... „ 314
præcox, Bieb. ... ... „ 316
? *Roylei*, DC. ... ... „ 314
Pyrola, *Linn.* ... ... iii. 475
asarifolia, Mich. ... ... „ 476
rotundifolia, *Linn.* ... ... „ 475
rotundifolia, DC. ... ... „ 476
PYROLEÆ ... ... iii. 456
Pyrospermum calophyllum, Miq. i. 622
Pyrostria ? spinosa, Miq. ... iii. 136
Pyrranthus albus, Wall. ... ii. 452
littoreus, Jack ... ... „ 452
Pyrrhosa Horsfieldii, Wight v. 106
Pyrrhotrichia tuberosa, W. & A. ii. 219
Pyrularia, *Michaux* ... ... v. 230
ceylanica, A. DC. ... ... „ 234
edulis, *A. DC.* ... ... „ 230
? *moschifera*, A. DC. ... „ 235
Wallichiana, A. DC. ... „ 234
Pyrus, *Linn.* ... ... ii. 372
Aria, Hk. f. & T. ... ... „ 375
Aria, Linn. ... ... „ 375
Aucuparia, *Gaertn.* ... ... „ 375
baccata, *Linn.* ... ... „ 373
castaneifolia, *Hk. f.* ... „ 379
communis *Linn.* ... ... „ 374
crenata, *D. Don* ... ... „ 380
crenata, Lindl. ... ... „ 375
cuspidata, *Bertol.* ... ii. 378, 379
Cydonia, Linn. ... ... ii. 369
ferruginea, *Hk. f.* ... ... „ 379
foliolosa, *Wall.* ... ... „ 376
foliolosa, Wall. ... ... „ 377
granulosa, *Bertol.* ... ... „ 378
Griffithii, *Hk. f.* ... ... „ 377
indica, Wall. ... ... „ 369
insignis, *Hk. f.* ... ... „ 377
integerrima, D. Don ... „ 381
Jacquemontiana, *Dcne* ... „ 374
karensium, Kurz ... ... „ 378
khasiana, *Hk. f.* ... ... „ 378
kumaonensis, Wall. ... ... „ 375
Kumaoni, *Dcne.* ... ... „ 374
lanata, *D. Don* ... ... „ 375
latifolia, Poir. ... ... „ 375
Malus, *Linn.* ... ... „ 373
microphylla, *Wall.* ... ... „ 376
nepalensis, Hb. Ham. ... „ 374
Nussia, D. Don ... ... „ 380
Nussia, Ham. ... ... „ 383
Pashia, *Ham.* ... ... „ 374
Pollveria, Linn. ... ... „ 380
polycarpa, *Hk. f.* ... ... „ 378
Pyrus Vol. Page
rhamnoides, *Hk. f.* ... ... ii. 377
Sieversii, Hk. f. ... ... „ 379
sikkimensis, *Hk. f.* ... ... „ 373
sikkimensis, Wenzig ii. 378, 379
Thomsoni, *King* ... ... ii. 379
ursina, Str. & Wint. ... „ 376
ursina, Wall. ... ... „ 376
variolosa, Wall. ... ... „ 374
verruculosa, Bertol. ... ... „ 374
vestita, *Wall.* ... ... „ 375
Wallichii, *Hk. f.* ... ... „ 376
sp., Hk. f. & T. ... ... „ 378
PYTHONIEÆ ... ... vi. 491
Pythonium bulbiferum, Schott vi. 515
Wallichianum, Schott ... „ 518
sp., Griff. ... ... vi. 499, 506
Pyxidium lividum, Moench iv. 721
oleraceum, Moench ... ... „ 721
viride, Moench ... ... „ 721

Quamoclit, Chois. ... ... iv. 198
coccinea, Moench ... ... „ 199
longiflora, G. Don ... ... „ 197
phœnicea, Chois. ... ... „ 199
vulgaris, Chois. ... ... „ 199
QUERCINEÆ ... ... v. 598
Quercus, *Linn.* ... ... v. 600
acuminata, *Roxb.* ... ... „ 607
acuta, Ham. ... ... „ 623
aliena, Bl. ... ... „ 603
Amherstiana, *Wall.* ... „ 607
anceps, Korth. ... ... „ 610
Andersoni, Hk. f. ... ... „ 608
annulata, Sm. ... . „ 604
Arcaula, Ham. ... ... „ 609
argyrophylla, Wall. ... ... „ 621
armata, Roxb. ... ... „ 622
Baloot, Griff. ... ... „ 602
bancana, Kurz ... ... „ 610
Banga, Ham. ... ... „ 603
Beccariana, *Benth.* ... ... „ 617
Bennettii, *Miq.* ... ... „ 612
Blumeana, *Korth.* ... ... „ 615
Brandisiana, *Kurz* ... ... „ 604
brevipetiolata, Scheff. ... „ 611
callicarpifolia, Griff. ... „ 609
Cantleyana, *King* ... ... „ 613
Cassura, D. Don ... ... „ 601
castanicarpa, Roxb. ... ... „ 621
? *caudata*, Lindl. ... ... „ 623
Clementiana, *King* ... ... „ 614
confragosa, *King* ... ... „ 616
conocarpa, *Oudem.* ... ... „ 612
costata, *Bl.* ... ... „ 617
crispula, Bl. ... ... „ 603
cuneata, Roxb. ... ... „ 614
Curtisii, *King* ... ... „ 612

Quercus Vol. Page
cyclophora, *Endl.* ... ... v. 615
cyrtorhyncha, *Miq.* ... „ 613
dealbata, *Hk. f. & T.* ... „ 609
dealbata, Brand. ... ... „ 602
dealbata, Wall ... ... „ 603
dentosa, Lindl. ... ... „ 601
depressa, Roxb.... ... ... „ 615
Diepenhorstii, Wenz. ... „ 613
dilatata, *Lindl.*... ... ... „ 602
discocarpa, *Hance* ... ... „ 616
? *divaricata*, Lindl. ... ... „ 618
dubia, *Lindl.* ... ... „ 620
Eichleri, *Wenz.* ... ... „ 615
elegans, Bl. ... ... „ 609
encleisocarpa, *Korth.* ... „ 617
eumorpha, *Kurz* ... ... „ 612
Ewyckii, *Korth.* ... ... „ 614
Falconeri, *Kurz* .. ... „ 608
fenestrata, *Roxb.* ... ... „ 608
fenestrata, Wall. .. ... „ 616
ferox, Roxb. ... ... „ 623
floribunda, Lindl. ... ... „ 602
glauca, *Thunb.* ... ... „ 604
glomerata, *Roxb.* ... ... „ 618
glomerata, Wall. ... v. 616, 623
gracilipes, Miq. ... ... v. 610
grandifolia, D. Don ... ... „ 609
grandifrons, *King* ... ... „ 610
Griffithii, *Hk. f. & T.* ... „ 602
grosseserrata, Bl. ... ... „ 603
Helferiana, *A. DC.* ... ... „ 05
hirsuta, Lindl. ... ... „ 608
Horsfieldii, Miq. ... ... „ 604
Hystrix, *Korth.* ... ... „ 611
Ilex, *Linn.*... ... ... „ 602
imbricata, Ham. ... ... „ 606
incana, *Roxb.* ... ... „ 603
Jenkinsii, Benth. v. 618, 624, 910
? *kamroopii*, D. Don... ... v. 605
Korthalsii, Bl. ... ... „ 611
Kunstleri, *King* ... ... „ 606
Kurzii, Hance ... ... „ 616
lamellosa, *Sm.* ... ... „ 606
Lamponga, *Miq.* ... ... „ 611
lanata, Sm. ... ... „ 603
lanceæfolia, *Roxb.* ... ... „ 616
lanuginosa, *D. Don* ... ... „ 603
lappacea, *Roxb.* ... ... „ 607
laxiflora, Lindl. ... ... „ 604
leucocarpa, Hk. f. & T. ... „ 615
Lindleyana, *Wall.* ... ... „ 607
lineata, *Bl.* ... ... „ 605
lucida, *Roxb.* ... ... „ 614
Mackiana, Hook. ... ... „ 608
? *macrophylla*, Miq. ... ... „ 611
Maingayii, *Benth.* ... ... „ 617
mappacea, Korth. ... ... „ 611

Quercus Vol. Page
mespilifolia, *Wall.* ... ... v. 605
microcalyx, Korth. ... ... „ 610
Miqueliana, Scheff. ... ... „ 613
mixta, A. DC. ... ... v. 610, 619
mongolica, Fisch. ... ... v. 603
muricata, Roxb. ... ... „ 611
? *oblongata*, D. Don ... ... „ 603
obtusifolia, D. Don ... ... „ 601
oidocarpa, *Korth.* ... ... „ 603
Olla, *Kurz* ... ... „ 619
Omalkos, *Korth.* ... ... „ 614
oxyodon, Miq. ... ... „ 605
oxyrhyncha, Miq. ... ... „ 605
pachyphylla, *Kurz* ... ... „ 608
paucilamellosa, A. DC. ... „ 606
penangensis, Miq. ... ... „ 615
Phullata, Ham. ... ... „ 604
placentaria, Wall. ... ... „ 615
polyantha, Lindl. ... ... „ 601
polyneura, Miq. .. ... „ 605
polystachya, *Wall.* ... ... „ 610
pruinosa, Bl. ... ... „ 611
Pseudo-molucca, Bl. ... ... „ 611
pyrifolia, Bl. ... ... „ 609
racemosa, Jack ... ... „ 609
Rassa, *Miq.* ... ... „ 613
rhamnifolia, Miq. ... ... „ 624
Roxburghii, Endl. ... ... „ 601
rufescens, Hk. f. & T. ... „ 620
Scortechinii, *King* ... ... „ 603
semecarpifolia, *Sm.* ... „ 601
semiserrata, *Roxb.* ... ... „ 604
serrata, *Thunb.* ... ... „ 601
serrata, Roxb. ... ... „ 620
spicata, *Sm.* ... ... „ 609
squamata, Roxb. ... ... „ 609
sundaica, *Bl.* ... ... „ 611
Thomsoni, *Miq.* ... ... „ 615
Thomsoniana, A. DC. ... „ 605
tribuloides, Sm. ... ... „ 623
truncata, *King* ... ... „ 618
turbinata, Roxb. .. v. 610, 615
umbonata, Hance ... ... v. 615
velutina, *Lindl.* ... ... „ 606
Wallichiana, *Lindl.*... ... „ 610
Wenzigiana, *King* ... ... „ 613
xylocarpa, *Kurz* ... ... „ 618
sp., Benth. ... ... v. 618, 619
sp. ... ... v. 619
Quinio cocculoides, Schlecht. i. 101
Quinquelobus glaber, Benj. ... iv. 272
Quisqualis, *Linn.* ... . ii. 459
densiflora, *Wall.* ... ... „ 460
ebracteata, Beauv. ... ... „ 459
glabra, Burm. ... ... „ 459
indica, *Linn.* ... ... „ 459
longiflora, Presl ... ... „ 459

Quisqualis Vol. Page
Loureiri, G. Don ... ... ii. 459
malabarica, *Bedd.* ... ... ,, 460
pubescens, Burm. ... ... ,, 459
sinensis, Lindl. ... ... ,, 459
villosa, Roxb. ... ... ,, 459
sp., Griff. ... ... ,, 459

Rabdochloa virgata, Beauv. vii. 291
Radermachera amœna, Seem. iv. 384
gigantea, Miq. ... ... ,, 384
Lobbii, Miq. ... ... ,, 384
stricta, Zoll. ... ... ,, 383
Ramphicarpa, *vide* Rhamphicarpa ... ... iv. 300
Rampinia herpetospermoides, Clarke ... ... ii. 613
Ramtilla oleifera, DC. ... ... iii. 308
Randia, *Linn.* ... ... iii. 109
anisophylla, *Jack* ... ... ,, 114
Candolleana, *W. & A.* ... ,, 113
corymbosa, W. & A. ... ... ,, 113
deccanensis, Bedd. ... ... ,, 113
densiflora, *Benth.* ... ... ,, 112
dumetorum, *Lamk.* ... ... ,, 110
exaltata, *Griff.* ... ... ,, 114
fasciculata, *DC.* ... ... ,, 109
floribunda, DC. ... ... ,, 110
Gardneri, *Thw.* ... ... ,, 112
Gardneri, Hk. f. ... ... ,, 112
Griffithii, *Hk. f.* ... ... ,, 112
hygrophyla, *Hk. f.* ... ... ,, 115
laurifolia, Hk. f. ... ... ,, 112
longiflora, *Lamk.* ... ... ,, 111
longispina, DC. ... ,, 110
macrophylla, *Hk. f* ... ... ,, 114
malabarica, *Lamk.* ... ... ,, 111
malabarica, Wall. ... iii. 109, 110
nutans, DC. ... ... iii. 110
polysperma, DC. ... ... ,, 120
polysperma, Roxb. ... ... ,, 120
racemosa, Roxb. ... ... ,, 120
rigida, DC. ... ... ,, 109
Rottleri, W. & A. . ... ,, 110
rugulosa, *Hk. f.* ... ... ,, 113
scandens, DC. ... ... ,, 111
sikkimensis, *Hk. f.* ... ... ,, 114
speciosa, Hk. f. ... ... ,, 117
spinosa, Bl. ... ... ,, 110
stipulosa, Miq. ... ... ,, 110
stricta, Roxb. ... . ,, 121
tetrasperma, *Benth. & Hk. f.* ,, 109
tomentosa, *Hk. f.* ... ... ,, 110
tomentosa, W. & A. ... ... ,, 110
uliginosa, *DC.* ... ... ,, 110
venulosa, Wall. ... ... ,, 121
Wallichii, *Hk. f.* ... ... ,, 113
Ranunculaceæ ... ... i. 1

Vol. Page
Ranunculeæ ... ... i. 1
Ranunculus, *Linn.* ... ... i. 16
acris, Linn. ... ... ,, 19
affinis, *Br.* ... ... ,, 18
amœnus, Ledeb. ... ... ,, 18
aquatilis, *Linn.* ... ... ,, 16
aquatilis, D. Don ... ... ,, 16
arvensis, *Linn.* ... ... ,, 20
attenuatus, Royle ... ... ,, 18
auricomus, Linn. ... ... ,, 19
brevirostris, Edgew. ... ,, 19
bulbosus, Linn. ... ... ,, 21
cabulicus, Boiss. ... ... ,, 20
cæspitosus, Wall. ... ... ,, 18
chærophyllos, *Linn.* ... ,, 18
chinensis, Bunge ... ... ,, 19
chоorensis, Royle ... ... ,, 18
Cymbalaria, Pursh. ... ,, 17
dahuricus, Turcz. ... ... ,, 18
diffusus, *DC.* ... ... ,, 19
distans, Royle ... ... ,, 19
falcatus, *Linn.* ... ... ,, 16
fibrosus, Wall. ... ... ,, 19
flaccidus, *Hk. f. & T.* ... ,, 20
Flammula, D. Don ... ... ,, 17
geranioides, Bl. ... ... ,, 19
glabratus, Royle ... ... ,, 18
hastatus, Walk. ... ... ,, 17
hirtellus, *Royle* ... ... ,, 18
hydrocotyloides, Wall. ... ,, 19
hyperboreus, *Rottb.* ... ,, 18
hyperboreus, Hk. f. & T. ,, 18
indicus, Roxb. ... ... ,, 19
javanicus, Bl. ... ... ,, 17
lætus, *Wall.* ... ... ,, 19
Lingua, *Linn.* ... ... ,, 16
lobatus, *Jacquem.* ... ... ,, 17
longicaulis, C. A. Mey. ... ,, 17
membranaceus, Royle ... ,, 17
mollis, Wall. ... ... ,, 19
muricatus, *Linn.* ... ... ,, 20
napaulensis, DC. ... ... ,, 19
natans, C. A. Mey. ... ... ,, 18
nephelogenes, Edgew. ... ,, 17
nervosus, Royle ... ... ,, 18
nivalis, *Linn.* ... ... ,, 19
obtectus, Wall. ... ... ,, 19
pedatifidus, Sm. ... ... ,, 18
pedatifidus, Ledeb. ... ... ,, 18
pennsylvanicus, *Linn.* ... , 19
pimpinelloides, D. Don ... ,, 14
pinnatus, Wight ... ... ,, 20
polypetalus, Royle ... ... ,, 21
pulchellus, *C. A. Mey.* ... ,, 17
Purshii, Hook. ... ... ,, 18
pygmæus, Vahl ... ... ,, 18
radicans, Hk. f. & T. ... ,, 18

Ranunculus Vol. Page
radicans, C. A. Mey. ... i. 18
reniformis, *Wall.* ... ... „ 16
repens, Linn. ... ... „ 19
riparius, Edgew. ... ... „ 19
sagittifolius, *Hook.* ... ... „ 17
salsuginosus, Wall. ... ... „ 17
salsuginosus, D. Don ... „ 17
sceleratus, *Linn.* ... ... „ 19
subpinnatus, W. & A. ... „ 19
trilobatus, D. Don ... ... „ 19
tuberculatus, DC. ... ... „ 20
vestitus, Wall. ... ... „ 21
vitifolius, Royle ... ... „ 19
Wallichianus, *W. & A.* ... „ 20
sp., Griff. ... ... „ 19
RAPHANEÆ ... ... i. 130
Raphanus, *Linn.* ... ... i. 166
caudatus, Linn. ... ... „ 166
Raphanistrum, Linn. ... „ 166
sativus, Linn. ... ... „ 163
Raphistemma, *Wall.* ... ... iv. 19
ciliatum, Hk. f. ... ... „ 20
Hooperianum, Dcne. ... „ 19
pulchellum, *Wall.* ... ... „ 19
Rapinia herbacea, Lour. ... iii. 438
Rapuntium arenarioides, Presl iii. 425
cæspitosum, Presl ... ... „ 425
campanuloides, Presl ... „ 425
coloratum, Presl ... ... „ 426
Leschenaultianum, Presl „ 427
nicotianæfolium, Presl ... „ 427
Nummularium, Presl ... „ 422
pyramidale, Presl ... ... „ 426
radicans, Presl ... ... „ 425
trialatum, Presl ... ... „ 425
Wallichianum, Presl ... „ 426
Ratonia Lessertiana, Benth. & Hk. f. ... ... i. 678
sumatrana, Kurz ... ... „ 679
Ratzeburghia, *Kunth* ... ... vii. 161
pulcherrima, *Kunth* vii. 153, 161
Schimperi, Steud. ... ... vii. 161
Rauwolfia, *Linn.* ... ... iii. 632
Beddomei, *Hk. f.* ... ... „ 634
decurva, *Hk. f.* ... ... „ 633
densiflora, *Benth.* ... ... „ 633
micrantha, *Hk. f.* ... ... „ 633
microcarpa, *Hk. f.* ... ... „ 633
nitida, Linn. ... ... „ 634
peguana, *Hk. f.* ... ... „ 632
Pulaparia, *Roxb.* ... ... „ 634
serpentina, *Benth.* ... ... „ 632
Ravenala madagascariensis, Sonn. ... ... vi. 198
Razumovia tranquebarica, Spreng. ... ... iv. 301
Rectomitra tuberculata, Bl. ii. 553
Reevesia, *Lindl.* ... ... i. 363
pubescens, *Mast.* ... ... „ 364
Wallichii, *Br.* ... ... „ 364
Regnaldia cluytioides (lapsu *myrtioides*), Baill. ... v. 460
Reichardia decapetala, Roth ii. 256
hexapetala, Roth ... ... „ 259
Reidia fimbriata, Wight ... v. 303
floribunda, Wight ... ... „ 303
glaucescens, Miq. ... ... „ 302
latifolia, Wight ... ... „ 301
? *ovalifolia*, Wight ... ... „ 302
polyphylla, Wight ... ... „ 302
Reinwardtia, *Dumort.* ... i. 411
indica, Dumort. ... ... „ 412
repens, Planch. ... ... „ 412
tetragyna, *Planch.* .. ... „ 412
trigyna, *Planch.* ... ... „ 412
trigyna, Dalz. & Gibs. ... „ 412
Remirea, *Aublet* ... ... vi. 677
disticophylla, Boeck. ... „ 677
maritima, *Aubl.* ... ... „ 677
pedunculata, Br. ... ... „ 677
Wightiana, Nees ... ... „ 677
Remusatia, *Schott* ... ... vi. 521
Hookeriana, *Schott* ... ... „ 522
vivipara, *Schott* ... ... „ 521
vivipara, Wight ... ... „ 519
Renanthera, *Lour.* ... ... vi. 48
angustifolia, *Hk. f.* ... ... „ 49
Arachnitis, Lindl. ... vi. 28, 197
bilinguis, Rchb. f. ... ... vi. 28
coccinea, *Lour.* ... ... „ 48
elongata, *Lindl.* ... ... „ 48
Flos-aeris, Rchb. f. ... ... „ 28
histrionica, *Rchb. f.* ... „ 49
labrosa, Rchb. f. ... ... „ 28
matutina, Lindl. ... ... „ 49
micrantha, Bl. ... ... „ 49
Rencalmia calcarata, Haw. vi. 254
fasciculata, Rosc. ... ... „ 241
mutica, Salisb. ... ... „ 255
nutans, Andr. ... ... „ 256
Rennellia, *Korth.* ... ... iii. 158
speciosa, *Hk. f.* ... ... „ 158
Reptonia, *A. DC.* ... ... iii. 534
buxifolia, *A. DC.* ... ... „ 534
Reseda, *Linn.* ... ... i. 181
Aucheri, *Boiss.* ... ... „ 181
bracteata, Boiss. ... ... „ 181
luteola, Linn. ... ... „ 181
nilgherrensis, J. Mull. ... „ 181
odorata, Linn. ... ... „ 181
oligandra, Edgew. ... ... „ 181
pruinosa, *Del.* ... ... „ 181
RESEDACEÆ ... ... i. 180
Restio articulatus, Retz. ... vi. 684

Vol. Page
Retinodendron lanceæfolium, Korth. ... i. 302
Retzia pilosa, Heyne ... iv. 219
Reutera acuminata, Edgew. ii. 686
Rhabdia, *Mart.* ... iv. 144
crebrifolia, Miers. ... „ 145
fluvialis, Edgew. ... „ 145
lycioides, *Mart.* ... „ 145
viminea, Dalz. & Gibs. ... „ 145
Rhabdochloa mucronata, Beauv. ... vii. 296
Rhagadiolus, *Juss.* ... iii. 392
Hedypnois, *Fisch. & Mey.* „ 392
Koelpinea, Willd. ... „ 392
Rhamnea ? diospyrifolia, Wall. i. 642
? lucida, Wall. ... „ 641
RHAMNEÆ ... i. 629, 630
Rhamnus, *Linn.* ... i. 638
acuminatus, Colebr. ... „ 642
Arnottianus, *Gardn.* ... „ 638
catharticus, Linn. ... „ 639
circumscissus, Linn. f. ... „ 641
dahuricus, *Pall.* ... „ 639
filiformis, Roth ... „ 641
? glabratus, Heyne ... „ 636
globosus, Bunge ... „ 639
hirsutus, W. & A. ... „ 639
Jujuba, Linn. ... „ 632
lineatus, Linn. ... „ 638
lucidus, Roxb. ... „ 641
myrtinus, Burm. ... „ 641
Napeca, Linn. ... „ 635
Neerija, Spreng. ... „ 623
nipalensis, *Laws.* ... „ 640
Nummularia, Burm. ... „ 633
Œnoplia, Linn. ... „ 634
parviflorus, Klein ... „ 641
parvifolius, Turcz. ... „ 639
persicus, *Boiss* ... „ 638
polymorphus, Turcz. ... „ 639
procumbens, *Edgew.* ... „ 640
purpureus, *Edgew.* ... „ 639
rupestris, Royle ... „ 641
theezans, Linn. ... „ 641
trigynus, D. Don ... „ 641
triqueter, *Laws.* ... „ 639
virgatus, Roxb. ... „ 639
Wightii, *W. & A.* ... „ 639
xylopyrus, Retz ... „ 634
zeylanicus, Burm. ... v. 288
Rhamphicarpa, *Benth.* ... iv. 300
fistulosa, Benth. ... „ 300
longiflora, *Benth.* ... „ 300
Rhamphidia elongata, Thw. vi. 197
Gardneri, Thw. ... „ 115
ovalifolia, Lindl. ... „ 115
rubens, Lindl. ... „ 115

Rhaphidophora, *Schott* ... vi. 543
affinis, *Schott* ... „ 543
angustifolia, Schott ... „ 543
Beccarii, *Engl.* ... „ 546
calophylla, Schott ... „ 545
caudata, Schott ... „ 549
crassifolia, *Hk. f.* ... „ 543
Cunninghamii, Schott ... „ 549
decursiva, *Schott* ... „ 547
eximia, *Schott* ... „ 547
glauca, *Schott* ... „ 547
gracilipes, *Hk. f.* ... „ 545
grandis, Schott ... „ 547
Hookeri, *Schott* ... „ 546
Korthalsii, *Schott* ... „ 548
Kunstleri, *Hk. f.* ... „ 54[illegible]
lacera, Hassk. ... „ 549
lancifolia, *Schott* ... „ 545
Lobbii, *Schott* ... „ 544
Maingayi, *Hk. f.* ... „ 543
minor, *Hk. f.* ... „ 544
Peepla, *Schott* ... „ 545
Peepla, Schott ... „ 544
pertusa, *Schott* ... „ 546
pinnata, Schott ... „ 549
pinnatifida, Schott ... „ 549
Schottii, *Hk. f.* ... „ 544
Scortechinii, *Hk. f.* ... „ 545
tetrasperma, *Hk. f.* ... „ 548
Wallichii, Schott ... „ 549
Wrayi, *Hk. f.* ... „ 544
Rhaphidospora ciliata, Nees iv. 536
dichotoma, Nees ... „ 543
glabra, Nees ... „ 535
sp., T. Anders. ... „ 533
Rhaphiophallus, Schott ... vi. 518
Rhaphis acicularis, Desv. ... vii. 188
ciliolata, Nees ... „ 193
coerulea, Nees ... „ 193
coerulescens, Desv. ... „ 179
echinulata, Nees ... „ 188
Gryllus, Desv. ... „ 188
javanica, Nees ... „ 188
microstachya, Nees ... „ 179
orientalis, Desv. ... „ 191
repens, Nees ... „ 179
Royleana, Nees ... „ 188
stricta, Nees ... „ 176
trivalvis, Lour. ... „ 188
villosula, Nees ... „ 179
Wightiana, Nees ... „ 191
zeylanica, Nees ... „ 192
Rhaptomeris Burmanni, Miers i. 104
Rhazya, *Dcne.* ... iii. 639
stricta, *Dcne.* ... „ 640
Rhesa (vide *Bhesa*) ... i. 622
Rheum, *Linn.* ... v. 55

Rheum Vol. Page
acuminatum, *Hk. f. & T.* ... v. 57
? *australe*, D. Don ... ... „ 57
Emodi, *Wall.* ... ... „ 56
Emodi, Wall. ... ... „ 57
Emodium, Wall. ... ... „ 56
leucorhizum, Pall. ... ... „ 56
Moorcroftianum, *Royle* ... „ 56
Moorcroftianum, Meissn. ... „ 56
nobile, *Hk. f. & T.* ... ... „ 57
spiciforme, *Royle* ... ... „ 55
tibeticum, *Maxim.* ... ... „ 56
Webbianum, *Royle* ... ... „ 57
sp., Hk. f. & T. ... ... „ 56
Rhinacanthus, Nees ... ... iv. 541
calcaratus, *Nees* ... ... „ 541
communis, *Nees* ... ... „ 541
Rottlerianus, Nees ... ... „ 541
RHINANTHIDEÆ ... ... iv. 248
? *Rhinanthus bifidus*, Ham. iv. 314
indica, Linn. ... ... „ 610
Rhiniachne Princeps, Hochst. vii. 148
Rhipidostigma, Hassk. ... iii. 552
Rhipsalis, *Gaertn.* ... ... ii. 658
Cassytha, *Gaertn.* ... ... „ 658
Rhizophora, *Linn.* ... ... ii. 435
Ægiceras, Linn. ... ... iii. 533
apiculata, Bl. ... ... ii. 436
Candel, Linn. ... ... „ 437
candelaria, DC. ... ... „ 436
candelaria, W. & A. ... ... „ 435
caryophylloides, Jack ... „ 438
caseolaris, Linn. ... ... „ 580
conjugata, *Linn.* ... ... „ 436
corniculata, Linn. ... ... iii. 533
cylindrica, Linn. ... ... ii. 438
cylindrica, Roxb. ... ... „ 438
decandra, Roxb. ... ... „ 436
gymnorrhiza, Roxb. ... ... „ 437
macrorrhiza, Griff. ... ... „ 435
Mangle, Linn. ... ... „ 435
mucronata, *Lam.* ... ... „ 435
parviflora, Roxb. ... ... „ 438
stylosa, Griff. ... ... „ 436
timorensis, DC. ... ... „ 436
RHIZOPHOREÆ ... ... ii. 434, 435
Rhodamnia, *Jack* ... ... ii. 468
cinerea, Griff. ... ... „ 468
cinerea, Jack ... ... „ 469
concolor, Miq. ... ... „ 468
Mulleri, Bl. ... ... „ 469
Nageli, Miq. ... ... „ 469
spectabilis, Bl. ... ... „ 469
subtriflora, Bl. ... ... „ 469
trinervia, *Bl.* ... ... „ 468
Rhodiola asiatica, D. Don ... ii. 419
imbricata, Edgew. ... ... „ 417
rosea, Linn. ... ... „ 417
Rhododendron, *Linn.* ... ... iii. 462
æruginosum, Hk. f. ... ... „ 466
album, Sw. ... ... „ 465
Anthopogon, *D. Don* ... „ 472
arboreum, *Sm.* ... ... „ 465
argenteum, Hk. f. ... ... „ 464
aromaticum, Wall. ... ... „ 472
Aucklandii, Hk. f. ... ... „ 468
barbatum, *Wall.* ... ... „ 468
Batemani, Hook. ... ... „ 466
bhotanicum, *Clarke* ... ... „ 475
blandfordiæflorum, Hk. f. „ 474
Blumei, Nutt. ... ... „ 466
Boothii, *Nutt.* ... ... „ 470
calopylla, Nutt. ... ... „ 473
camelliæflorum, *Hk. f.* .. „ 470
campanulatum, *D. Don* .. „ 466
Campbelliæ, Hk. f. ... ... „ 465
campylocarpum, *Hk. f.* ... „ 467
Candelabra, Hk. f. ... ... „ 468
celebicum, DC. ... ... „ 463
ciliatum, *Hk. f.* ... ... „ 470
cinnabarinum, *Hk. f.* ... „ 474
cinnamomeum, Wall. ... „ 465
Dalhousiæ, *Hk. f.* ... ... „ 469
deflexum, Griff. ... ... „ 474
Edgarii, Gamble ... ... „ 466
Edgeworthii, *Hk. f.* ... ... „ 469
elæagnoides, Hk. f. ... ... „ 471
eximium, Nutt. ... ... „ 465
Falconeri, *Hk. f.* ... ... „ 465
formosum, *Wall.* ... ... „ 473
fragrans, Maxim. ... ... „ 472
fulgens, *Hk. f.* ... ... „ 466
glaucum, *Hk. f.* ... ... „ 471
Gibsonii, Paxt. ... ... „ 473
grande, *Wight* ... ... „ 464
Griffithianum, *Wight* ... „ 468
Hodgsoni, *Hk. f.* ... ... „ 464
Hookeri, *Nutt.* ... ... „ 468
jasminiflorum, *Hook.* ... „ 463
javanicum, *Benn.* ... ... „ 463
Jenkinsii, *Nutt.* ... ... „ 473
Kendrickii, *Nutt.* ... ... „ 466
Keysii, *Nutt.* ... ... „ 474
lampongum, Miq. ... ... „ 463
lanatum, *Hk. f.* ... ... „ 467
lancifolium, Hk. f. ... ... „ 469
lepidotum, *Wall.* ... ... „ 471
leptocarpum, *Nutt.* ... ... „ 471
longifolium, Nutt. ... ... „ 464
lucidum, *Nutt.* ... ... „ 475
macranthum, Griff. ... ... „ 473
macrocarpos, Griff. ... ... „ 469
Maddeni, *Hk. f.* ... ... „ 472
malayanum, *Jack* ... .. „ 462
micranthum, Maxim. ... „ 472

Rhododendron Vol. Page
moulmainense, *Hook.* ... iii. 463
nilagiricum, Zenk. ... ... „ 466
nivale, *Hk. f.* ... ... „ 472
niveum, *Hk. f.* ... ... „ 466
nobile, Wall. ... ... iii. 466, 469
Nuttallii, *Booth* ... ... iii. 470
oblongum, Griff. ... ... „ 468
obovatum, Hk. f. ... ... „ 471
palustre, Turcz. ... ... „ 472
Parishii, *Clarke* ... ... „ 475
parviflorum, Schm. ... ... „ 472
parvifolium, Adams ... „ 472
pendulum, *Hk. f.* ... ... „ 469
planifolium, Nutt. ... ... „ 466
pumilum, *Hk. f.* ... ... „ 471
pumilum, Nutt. ... ... „ 471
puniceum, Roxb. ... ... „ 465
Roylei, Hk. f. ... ... „ 474
salignum, Hk. f. ... ... „ 471
setosum, *D. Don* ... ... „ 472
Shepherdii, *Nutt.* ... ... „ 467
Smithii, Nutt. ... ... „ 469
sparsiflorum, Nutt. ... ... „ 470
Teysmanni, *Miq.* ... ... „ 463
Thomsoni, *Hk. f.* ... ... „ 468
triflorum, *Hk. f.* ... ... „ 474
tubiflorum, DC. ... ... „ 463
vaccinioides, *Hk. f.* ... ... „ 464
Veitchianum, *Hook.* ... „ 473
venosum, Nutt. ... ... „ 465
virgatum, *Hk. f.* ... ... „ 474
Wallichii, Hk. f. ... ... „ 466
Wightii, *Hk. f.* ... ... „ 467
Windsorii, Nutt. ... iii. 464, 465
sp., Griff. iii. 464, 465, 466, 467, 468, 469, 471, 473, 474
Rhodomyrtus, *DC.* ... ... ii. 469
tomentosa, *Wight* ... ... „ 469
Rhodora deflexa, Griff. ... iii. 461
Rhodoracea, *Griff.* ... ... iii. 474
Rhodoraceæ, Griff. ... ... iii. 461
RHODOREÆ ... ... iii. 456
Rhomboda longifolia, Lindl. vi. 109
Rhopala attenuata, Jack ... v. 190
excelsa, Roxb. ... ... „ 191
glabrata, Wall. ... ... „ 191
moluccana, Jack ... ... „ 190
racemosa, Roxb. ... ... „ 190
robusta, Roxb. ... ... „ 191
Rhopaloblaste singaporensis, Hk. f. ... ... vi. 413
Rhopalocnemis, *Jungh.* ... v. 238
phalloides, *Jungh.* ... ... „ 239
Rhuacophila javanica, Bl. ... vi. 337
Rhus, *Linn.* ... ... ii. 9
acuminata, DC. ... ... „ 12
Amela, D. Don ... ... „ 10
Rhus Vol. Page
Buckiamela, Roxb. ... ... ii. 10
Cobbe, Linn. ... ... i. 673
Cotinus, *Linn.* ... ... ii. 9
decipiens, W. & A. ... ... i. 540
? Dhuna, *Ham.* ... ... ii. 11
fraxinifolia, D. Don ... i. 490
Griffithii, *Hk. f.* ... ... ii. 12
insignis, *Hk. f.* ... ... „ 11
integerrima, Wall. ... ... „ 13
javanica, Linn. ... ... „ 10
juglandifolia, Wall. ... „ 11
Kakrasingee, Royle ... ... „ 13
khasiana, *Hk. f.* ... ... „ 10
lævis, Wall. ... ... „ 9
mysorensis, *Heyne* ... ... „ 9
paniculata, *Wall.* ... ... „ 10
parviflora, *Roxb.* ... ... „ 9
punjabensis, *Stewart* ... „ 10
semi-alata, *Murr.* ... ... „ 10
succedanea, *Linn.* ... ... ii. 12, 42
velutina, Wall. ... ... ii. 9
vernicifera, DC. ... ... „ 11
Wallichii, *Hk. f.* ... ... „ 11
Rhyncanthera paniculata, Bl. vi. 91
Rhynchanthus, *Hk. f.* ... vi. 257
longiflorus, *Hk. f.* ... .. „ 257
Rhynchelytrum Wightii, Duthie ... ... vii. 65
Rhynchocarpa, *Schrad.* ... ii. 627
? deltoidea, *Kurz* ... ... „ 627
fœtida, *Schrad.* ... ... „ 627
rostrata, Kurz ... ... „ 627
Rhynchodia, *Benth.* ... ... iii. 666
Wallichii, Benth. ... ... „ 667
Rhynchoglossum, *Bl.* ... iv. 367
Blumei, DC. ... ... „ 367
obliquum, *Bl.* ... ... „ 367
obliquum, Hohen. ... ... „ 366
obliquum, Wight ... ... „ 367
scabrum, Dalz. ... ... „ 366
zeylanicum, Hook. ... ... „ 367
Rhyncholepis, ? *Roxburghii*, Miq. ... ... v. 88
Rhynchopyle elongata, Engl. vi. 539
Rhynchosia, *Lour.* ... ... ii. 220
acutissima, *Thw.* ... ... „ 226
aurea, *DC.* ... ... „ 221
avensis, *Benth.* ... ... „ 222
Beddomei, *Baker* ... ... „ 222
biflora, DC. ... ... „ 215
bracteata, *Benth.* ... ... „ 225
cana, *DC.* ... ... „ 222
Candollei, Dcne. ... ... „ 224
capitata, DC. ... ... „ 221
coodoorensis, Bedd. ... „ 220
crotalarioides, DC. ... ... „ 229
cyanosperma, *Benth.* ... „ 222

Rhynchosia Vol. Page
densiflora, *DC.* ... ... ii. 226
densiflora, Wall. ... ... „ 221
elongata, DC. ... ... „ 221
ervoidea, DC. ... ... „ 223
Falconeri, *Baker* ... ... „ 224
filicaulis, Grah. ... ... „ 224
filipes, *Benth.* ... ... „ 221
Grahami, Wall. ... ... „ 219
Heynei, *W. & A.* ... ... „ 220
himalensis, *Benth.* ... ... „ 225
laxiflora, Camb. ... . „ 224
lucida, DC. ... ... „ 191
medicaginea, DC. ... ... „ 223
Memnonia, *DC.* ... ... „ 224
microphylla, Wall. ... ... „ 223
minima, *DC.* ... ... „ 223
mollissima, *Dalz.* ... ... „ 226
nula, DC. ... ... „ 223
Nummularia, *DC.* ... ... „ 221
pilosa, *Wall.* ... ... „ 224
prostrata, Grah. ... ... „ 223
Pseudo-cajan, *Camb.* ... „ 223
pulverulenta, Stocks ... „ 224
rhombifolia, DC. ... ... „ 223
rosea, DC. ... ... „ 196
rufescens, *DC.* ... ... „ 220
scarabæoides, DC. ... ... „ 215
sericea, *Spanoghe* ... ... „ 225
stipulosa, A. Rich. ... ... „ 225
suaveolens, *DC.* ... ... „ 221
tenuicaulis, Wall. ... ... „ 224
velutina, *W. & A.* ... ... „ 224
velutina, Grah. ... ... „ 215
vestita, Wall. ... ... „ 216
villosula, Thw. ... ... „ 225
virgata, Grah. ... ... „ 219
viscida, DC. ... ... „ 154
viscosa, *DC.* ... ... „ 225
Wightiana, Grah. ... ... „ 212
Rhynchospermum, *Reinw.* iii. 248
verticillatum, *Reinw.* ... „ 248
Rhynchospermum, A. DC. ... iii. 667
ellipticum, *A. DC.* ... ... „ 667
Wallichii, A. DC. ... ... „ 667
sp., Hk. f. & T. ... iii. 668, 671
Rhynchostylis, *Bl.* ... vi. 32, 178
garwalica, Rchb. f. ... ... vi. 32
guttata, Rchb. f. ... ... „ 32
præmorsa, Bl. ... ... „ 32
retusa, *Bl.* ... ... „ 32
Rhynchotechum, *Bl* ... ... iv. 372
alternifolium, *Clarke* ... „ 374
calycinum, *Clarke* ... ... „ 374
ellipticum, *A. DC.* ... ... „ 373
latifolium, *Hk. f. & T.* ... „ 374
parviflorum, *Bl.* ... ... „ 373
vestitum, *Hk. f. & T.* ... „ 373

Rhynchotechum Vol. Page
sp., Wall. ... ... iv. 362
Rhytidandra, A. Gray ... ii. 742
Rhytiglossa ? indica, Wawra iv. 543
? ptychostoma, Nees ... „ 534
radicosa, Nees ... ... „ 514
Ribes, *Linn.* ... ... ii. 409
acuminatum, Wall. ... ... „ 410
alpestre, Dcne. ... . „ 410
desmocarpum, *Hk. f. & T.* „ 410
glaciale, *Wall.* ... ... „ 410
glutinosum, Jacq. ... ... „ 410
Griffithii, *Hk. f. & T.* ... „ 411
Grossularia, *Linn.* ... ... „ 410
heterotrichum, Ledeb. ... „ 410
himalayense, Dcne. ... ... „ 411
himalensis, Royle . ... „ 410
laciniatum, Hk. f. & T. ... „ 410
leptostachyum, Dcne. ... „ 410
luridum, *Hk. f. & T.* ... „ 410
nigrum, *Linn.* ... ... „ 411
orientale, *Poir.* ... ... „ 410
rubrum, *Linn.* ... ... „ 411
villosum, Wall. ... ... „ 410
RIBESIEÆ ... ... ii. 389
Richteria pyrethroides, Kar. & Kir. ... ... iii. 315
Ricinus, *Linn.* ... ... v. 457
communis *Linn.* ... v. 239, 457
dioicus, Wall. ... ... v. 425
furfuraceus, Wall. ... ... „ 353
inermis, Jacq. ... ... „ 457
inermis, Wall. ... ... „ 448
lividus, Jacq. ... ... „ 457
Mappa, Roxb. ... ... „ 447
montanus, Wall. ... ... „ 462
salicinus, Hassk. ... ... „ 455
speciosus, Burm. ... ... „ 457
spectabilis, Bl. ... ... „ 457
Tanarius, Linn. ... ... „ 447
Tanarius, Lour. ... ... „ 432
trilobus, Reinw. ... ... „ 452
viridis, Willd. ... ... „ 457
Ridleya ... ... vi. 33, 42
Riedelia, Trin.
Mikani, Trin. ... ... vii. 73
Riedlea, Vent.
concatenata, DC. ... ... i. 374
corchorifolia, DC. ... ... „ 374
supina, DC. ... ... „ 374
tiliæfolia, DC. ... ... „ 374
truncata, W. & A. ... ... „ 374
Rindera glochidiata, Wall. iv. 161
Ripidium Ravennæ, Trin. ... vii. 121
Rissoa zeylanica, Arn. ... i. 512
Rivea, *Chois.* ... ... iv. 183
Bona-nox, Roxb. ... ... „ 184
cuneata, Wight ... ... „ 191

Rivea Vol. Page
fragrans, Nimmo ... ... iv. 184
hirsuta, Wight ... ... ,, 189
hypocrateriformis, *Chois.* ,, 184
? *obtecta*, Chois. ... ... ,, 186
ornata, *Chois.* ... ... ,, 183
ornata, Aitch. ... ... ,, 184
pomacea, Wight ... ... ,, 188
tiliæfolia, Chois. ... ... ,, 184
zeylanica, Thw. ... ... ,, 187
Rivina lævis, Linn. ... ... v. 21
Latbenia, Ham. ... ... ,, 21
orientalis, Moq. ... ... ,, 21
Robartia (vide *Bobartia*) ... vi. 602
Robergia hirsuta, Roxb. ... ii. 28
Robinia candida, Roxb. ... ii. 111
ferruginea, Roxb. ... ... ,, 246
fruticosa, Roxb. ... ... ,, 109
Heynei, Wall. ... ... ,, 251
macrophylla, Roxb. ... ... ,, 108
mitis, Linn. ... ... ,, 240
pygmæa, Linn. ... ... ,, 116
racemosa, Roxb. ... ... ,, 105
sennoides, Roxb. ... ... ,, 110
suberosa, Roxb. ... ... ,, 110
uliginosa, Willd. ... ... ,, 241
Rochelia, *Rchb.* ... ... iv. 165
barbata, R. & S. ... ... ,, 163
cardiosepala, *Bunge* ... ,, 166
echinophora, R. & S. ... ,, 163
macrocalyx, Bunge ... ... ,, 166
rectipes, *Stocks* ... ... ,, 166
Redowskii, R. & S. ... ... ,, 163
saccharata, Rchb. ... ... ,, 166
stellulata, *Rchb.* ... ... ,, 166
stellulata, Aitch. ... ... ,, 166
stylaris, *Boiss.* ... ... ,, 166
Rodetia Amherstiana, Moq. iv. 716
Rolfinkia centaurioides, Zenk. iii. 227
Rondeletia asiatica, Linn. ... iii. 102
cinerea, Wall. ... ... ,, 37
coriacea, Wall. ... ... ,, 39
corymbosa, Jack ... ... ,, 41
exserta, Roxb. ... ... ,, 37
Heynei, R. & S. ... ... ,, 37
longifolia, Wall. ... ... ,, 95
lucida, Wall. ... ... ,, 103
mollis, Wall. ... ... ,, 104
orissensis, Roth ... ... ,, 37
paniculata, Roth ... ... ,, 39
proxima, D. Don ... ... ,, 38
spicata, Wall. ... ... ,, 41
stricta, Roth ... ... ,, 121
tetrandra, Roxb. ... ... ,, 54
thyrsiflora, Roth ... ... ,, 37
tinctoria, Bl. ... ... ,, 39
tinctoria, Roxb. ... ... ,, 38
RONDELETIEÆ ... ... iii. 18, 37

Vol. Page
Ropalopetalum uniflorum, Griff. ... ... i. 55
Rosa, *Linn.* ... ... ii. 363
alba, Linn. ... ... ,, 364
anserinæfolia, *Boiss.* ... ,, 365
Banksiæ, Br. ... ... ,, 364
bicolor, Jacq. ... ... ,, 366
bracteata, Wendl. ... ... ,, 364
brevicuspis ... ... ,, 368
Brunonii, Lindl. ... ... ,, 367
Brunonis, Wall. ... ... ,, 367
centifolia, Linn. ... ... ,, 364
chinensis, Jacq. ... ... ,, 364
damascena, Mill. ... ... ,, 364
Eglanteria, Mill. ... ... ,, 364
Eglanteria, *Linn.* ... ... ,, 366
Fortuneana, Lem. ... ... ,, 364
fragrans, Redouté ... ... ,, 364
gallica, Linn. ... ... ,, 364
glandulifera, Roxb. ... ii. 364, 367
Gulielmi Waldemarii, Klotz. ii. 366
Hoffmeisteri, Klotz. ... ... ,, 366
Hookeriana, Bertol. ... ,, 366
Hookeriana, Wall. ... ... ,, 366
indica, Linn. ... ... ,, 364
inermis, Roxb. ... ... ,, 364
involucrata, *Roxb.* ... ... ,, 365
Jacquemontii, *Crep.* ... ,, 368
Leschenaultiana, *W. & A.* ,, 368
Lindleyana, Tratin. ... ,, 365
Lindleyi, Wall. ... ... ,, 367
longicuspis, *Bertol.* ... ,, 367
lutea, Mill. ... ... ,, 366
Lyellii, Lindl. ... ... ,, 365
macrophylla, *Lindl.* ... ,, 366
microcarpa, Lindl. ... ... ,, 364
microphylla, Lindl. ... ,, 364
Moorcroftii, Wall. ... ... ,, 368
moschata, *Mill.* ... ... ,, 367
multiflora, Hb. Ham. ... ,, 365
multiflora, Thunb. ... ... ,, 364
palustris, Buch. ... ... ,, 365
pimpinellifolia, Hk. f. & T. ,, 366
pubescens, Roxb. ... ... ,, 367
Rapini, Boiss. ... ... ,, 364
? *recurva*, Roxb. ... ... ,, 367
semperflorens, Linn. ... ,, 364
sempervirens, Hk. f. & T. ,, 368
sempervirens, Linn. ... ... ,, 367
sericea, *Lindl.* ... ... ,, 367
sinica, Ait. ... ... ,, 364
sinica, Linn. ... ... ,, 364
sulphurea, Ait. ... ... ,, 364
tetrapetala, Royle ... ... ,, 367
torulosa, Wall. ... ... ,, 366
triphylla, Roxb. ... ... ,, 364
unguicularis, Bertol. ... ,, 366

Rosa ... Vol. Page
  Wallichii, Sabine ... ii. 368
  Wallichii, Trattin. ... „ 367
  Webbiana, *Wall.* ... „ 366
Rosacea, Wall. ... ii. 378
ROSACEÆ ... ii. 307
Roscoea, *Sm.* ... vi. 207
  alpina, *Royle* ... „ 207
  capitata, *Sm.* ... „ 208
  elatior, Sm. ... „ 208
  gracilis, Sm. ... „ 208
  longifolia, *Baker* ... „ 208
  lutea, Royle ... „ 208
  petiolata, Royle ... „ 209
  purpurea, *Sm.* ... „ 207
  purpurea, Lindl. ... „ 208
  purpurea, Royle ... „ 207
  spicata, Sm. ... „ 209
Roscoea, Roxb. ... iv. 602
  pentandra, Roxb. ... „ 602
  tomentosa, Roxb. ... „ 603
  villosa, Roxb. ... „ 603
ROSEÆ ... ii. 308
Rostellularia abyssinica, Brongn. ... iv. 539
  adenostachya, Nees ... „ 539
  crinita, Nees ... „ 536
  diffusa, Nees ... „ 538
  glandulosa, Nees ... „ 539
  gracilis, Wight ... „ 548
  hedyotidifolia, Nees ... „ 538
  mollissima, Nees ... „ 539
  peploides, Nees ... „ 537
  procumbens, Nees ... „ 539
  procumbens, Wight ... „ 539
  quinquangularis, Nees ... „ 537
  rotundifolia, Nees ... iv. 538, 539
  Royeniana, Nees ... iv. 537
  sarmentosa, Zoll. ... „ 544
  simplex, Wight ... „ 537
  Vahlii, Nees ... „ 538
Rostkovia ensiformis, Ham. vi. 396
Rostraria pubescens, Trin. vii. 309
Rotala apetala, F. Muell. ... ii. 568
  ? *decussata*, DC. ... „ 569
  filiformis, Hiern ... „ 568
  myriophylloides, Welw. ... „ 572
  Roxburghiana, Wight ... „ 569
  verticillaris, Linn. ... „ 567
  sp., Wall. ... „ 572
Rotang Pajare, Griff. ... vi. 459
Rothia, *Pers.* ... ii. 63
  trifoliata, *Pers.* ... „ 63
Rothmannia macrophylla, Br. iii. 114
Rottboellia, *Linn. f.* ... vii. 151
  acuminata, *Hack.* ... „ 155
  altissima, Poir. ... „ 153
  anceps, Ham. ... „ 153

Rottboellia ... Vol. Page
  arundinacea, Hochst. ... vii. 156
  biflora, Roxb. ... „ 365
  ciliaris, Willd. ... „ 367
  Clarkei, *Hack.* ... „ 156
  complanata, Sw. ... „ 90
  compressa, *Linn. f.* ... „ 153
  compressa, Beauv. ... „ 90
  compressa, Linn. f. ... „ 153
  compressa, Wall. ... „ 154
  corymbosa, Linn. f. ... „ 160
  Cymbachne, Willd. ... „ 210
  denudata, Steud. ... „ 156
  dimidiata, Thunb. ... „ 91
  divergens, *Hack.* ... „ 155
  elegantissima, Hochst. & Steud. ... „ 161
  exaltata, *Linn. f.* ... „ 156
  fasciculata, Lamk. ... „ 153
  geminata, *Hack.* ... vii. 159, 160
  genuina, Hack. ... vii. 157
  gibbosa, Hack. ... „ 156
  glabra, Roxb. ... „ 153
  glandulosa, *Trin.* ... „ 157
  gymnorhiza, Ham. ... „ 156
  ? *Hamiltoni*, Trin. ... „ 154
  Helferi, *Hk. f.* ... „ 158
  hirsuta, Forsk. ... „ 160
  hirsuta, Vahl ... „ 162
  hispida, Roxb. ... „ 156
  khasiana, Hack. ... „ 157
  khasiana, Munro ... „ 157
  laevis, Retz. ... „ 158
  longiflora, *Hk. f.* ... „ 154
  merguensis, *Hk. f.* ... „ 158
  muricata, Retz. ... „ 140
  Myurus, *Benth.* ... „ 154
  nigrescens, *Thw.* ... „ 157
  paleacea, Steud. ... „ 91
  perforata, *Roxb.* ... vii. 153, 160
  pilosa, Roth ... vii. 284
  pilosa, Willd. ... „ 366
  protensa, *Hack.* ... „ 153
  punctata, Retz. ... „ 160
  quaterna, Ham. ... „ 153
  repens, Forst. ... „ 365
  repens, Roxb. ... „ 153
  ? *Roxburghiana*, Schult. ... „ 365
  sanguinea, Retz. ... „ 167
  setacea, Roxb. ... „ 283
  setosa, Presl ... „ 156
  spathacea, Ten. ... „ 153
  speciosa, *Hack.* ... „ 152
  striata, *Nees* ... „ 157
  Talboti, *Hk. f.* ... „ 155
  Talboti, Lisboa ... „ 156
  Thomæa, Koen. ... „ 366
  thyrsoidea, Hack. ... „ 152

Rottboellia Vol. Page
? *triacantha*, Roth ... vii. 284
tripsacoides, Lamk. ... „ 91
villosa, *Poir.* ... „ 159
Zea, *Clarke* ... „ 152
? *sp.* Wall ... „ 157
Rottlera, Vahl ... iv. 353
incana, Vahl ... „ 353
Rottlera, Roxb.
affinis, Hassk ... v. 442
alba, Roxb. ... „ 429
aurantiaca, Hook. & Arn. „ 442
aureo-punctata, Dalz. ... „ 438
barbata, Wall. ... „ 428
bifaria, Ham. ... „ 459
congesta, Ham. ... „ 459
? *cordifolia*, Benth. ... „ 442
digyna, Thw. ... „ 453
dioica, Baill. ... „ 442
eriocarpa, Thw. ... „ 432
fasciculata, Ham. ... „ 459
floribunda, Hassk. ... „ 432
fuscescens, Thw. ... „ 441
indica, Willd. ... „ 423
integrifolia, Ham. ... „ 447
javanica, Hassk. ... „ 451
lanceolata, Ham. ... „ 459
lappacea, Wall. ... „ 425
macrostachya, Miq. ... „ 429
mappoides, Dalz. ... „ 429
mollis, Wall. ... „ 442
mollissima, Wall. ... „ 421
montana, Heyne ... „ 451
montana, Wall. ... „ 442
muricata, Thw. ... „ 437
oppositifolia, Thw. ... „ 440
paniculata, A. Juss. ... „ 430
paniculata, Wall. ... v. 429, 442
peltata, Miq. ... v. 430
peltata, Roxb. ... „ 428
peltata, Wight ... „ 429
rhombifolia, Thw. ... „ 442
rhynchophylla, Miq. ... „ 433
ricinoides, A. Juss. ... „ 430
scabrifolia, A. Juss. ... „ 442
subpeltata, Baill. ... „ 433
suffruticosa, Wall. ... „ 462
Tanaria, Hassk. ... „ 447
tetracocca, Roxb. ... „ 429
Thwaitesii, Baill. ... „ 423
tinctoria, Roxb. ... „ 442
tomentosa, Hassk. ... „ 447
tricocca, Roxb. ... „ 442
trinervis, Zipp. ... „ 442
urandra, Dalz. ... „ 444
viscida, Bl. ... „ 442
Zippelii, Hassk. ... „ 430
Rotula aquatica, Lour. ... iv. 145

Vol. Page
Roucheria, *Planch.* ... i. 413
Griffithiana, *Planch.* ... „ 414
Roumea hebecarpa, Gardn. ... i. 195
Jangomas, Spreng. ... „ 193
Rourea, *Aubl.* ... ii. 47
acuminata, *Hk. f.* ... „ 48
caudata, *Planch.* ... „ 48
commutata, *Planch.* ... „ 47
concolor, *Bl.* ... „ 49
dasyphylla, Miq. ... „ 54
diversifolia, Miq. ... i. 440
fulgens, *Planch.* ... ii. 49
parallela, Planch. ... „ 50
parvifolia, Planch. ... „ 49
pulchella, *Planch.* ... „ 48
rugosa, *Planch.* ... „ 48
santaloides, *W. & A.* ... „ 47
? *sclerocarpa*, W. & A. ... „ 51
similis, *Bl.* ... „ 49
sororia, Planch. ... „ 50
stenopetala, *Hk. f.* ... „ 49
villosa, *Planch.* ... „ 48
Wallichiana, *Planch.* ... „ 49
sp., Planch. ... „ 49
Roureopsis, *Planch.* ... ii. 50
pubinervis, *Planch.* ... „ 50
Roussinia indica, Gaud. ... vi. 486
Roxburghia, Kœn. ... i. 575
baccata, Kœn. ... „ 575
Roxburghia, Banks ... vi. 298
Gloriosa, Pers. ... „ 298
gloriosoides, Jones ... „ 298
gloriosoides, Wight ... „ 298
Stemona, Steud. ... „ 298
viridiflora, Sm. ... „ 298
ROXBURGHIACEÆ ... vi. 297
Roydsia, *Roxb.* ... i. 180
floribunda, Planch. ... „ 409
obtusifolia, *Hk f. & T.* i. 180, 409
parviflora, Griff. ... „ 180, 409
suaveolens, *Roxb.* ... i. 180
Roylea, *Wall.* ... iv. 679
elegans, *Wall.* ... „ 679
Roylea, Nees ... vii. 284
RUBEÆ ... ii. 307
Rubia, *Linn.* ... iii. 202
aculeata, Royle ... „ 203
alata, Wall. ... „ 202
albicaulis, *Boiss.* ... „ 204
angustissima, *Wall.* ... „ 203
charæfolia, Wall. ... „ 203
chinensis, Regel & Maack „ 202
cordifolia, *Linn.* ... „ 202
Edgeworthii, *Hk. f.* ... „ 203
himalayense, *Klotz.* ... „ 203
javana, DC. ... „ 202
Kotschyi, Boiss. ... „ 204

Rubia — Vol. Page
mitis, Miq. ... iii. 202
Mungisth, Desv. ... „ 202
Munjista, Roxb. ... „ 202
purpurea, Dcne. ... „ 202
scandens, Zoll. & Mor. ... „ 202
secunda, Moon ... „ 202
sikkimensis, *Kurz* ... „ 203
tibetica, *Hk. f.* ... „ 204
tinctorum, *Linn.* ... „ 203
Rubiacea, Wall. i. 641, iii. 100, 108, 109, 111, 112, 113, 116, 120, 121, 123, 125, 132, 133, 135, 139, 147, 159, 160, 162, 171, 174, 177, 180, 181, 183, 185, 189, 191, 192
RUBIACEÆ ... iii. 17
Rubus, *Linn.* ... ii. 326
acerifolius, Wall. ... „ 329
acuminatus, *Sm.* ... „ 327
affinis, Madden ... „ 337
albescens, Roxb. ... „ 339
alceæfolius, Poir. ... „ 330
alpestris, *Bl.* ... „ 332
Andersoni, *Hk. f.* ... „ 333
antennifer, *Hk. f.* ... „ 337
asper, D. Don ... „ 341
asper, Hb. Royle ... „ 336
assamensis, *Focke* ... „ 328
betulinus, D. Don ... „ 327
biflorus, *Ham.* ... „ 338
bijugus, Focke ... „ 339
birmanicus, *Hk. f.* ... „ 331
calycinus, *Wall.* ... „ 327
Clarkei, *Hk. f.* ... „ 337
cæsius, Linn. ... „ 335
colchicus, Stev. ... „ 338
concolor, Royle ... „ 335
concolor, Wall. ... „ 335
cordifolius, D. Don ... „ 330
discolor, Weihe & Nees ... „ 337
distans, D. Don ... „ 339
ellipticus, *Sm* ... „ 336
ellipticus, Wall. ... „ 337
Fairholmianus, Gard. ii. 330, 331
ferox, *Wall.* ... ii. 329
Finlaysonianus, Wall. ... „ 330
flavus, Ham. ... „ 336
Fockeanus, *Kurz* ... „ 334
foliolosus, *D. Don* ... „ 340
fragarioides, *Bertol.* ... „ 332
fraxinifolius, Poir. ... „ 342
fruticosus, *Linn.* ... „ 337
furfuraceus, Wall. ... „ 339
glomeratus, *Bl.* ... ii. 328, 331
Gowreephul, Roxb. ... ii. 336
gracilis, Roxb. ... „ 335
Griffithii, *Hk. f.* ... „ 327
Hamiltoni, *Hk. f.* ... „ 328

Rubus — Vol. Page
Hamiltonianus, Ser. ... ii. 330
Hasskarlii, Miq. ... „ 329
hexagynus, *Roxb.* ... „ 327
hibiscifolius, *Focke* ... „ 342
hirtus, Roxb. ... „ 336
Hoffmeisterianus, Kunth & Bouché ... „ 342
Hookeri, *Focke* ... „ 334
horridulus, *Hk. f.* ... „ 341
Horsfieldii, Miq. ... „ 339
hypargyrus, Edgew. ... „ 335
indicus, Heyne ... „ 339
indicus, Lesch. ... „ 328
insignis, *Hk. f.* ... „ 329
Ischelus, Hb. Ham. ... „ 339
lævigatus, Wall. ... „ 338
lanatus, *Wall.* ... „ 331
lasiocarpus, *Sm.* ... „ 339
lasiocarpus, Sm. ... „ 340
lineatus, *Reinw.* ... „ 333
lobatus, Wall. ... „ 327
longifolius, Wall. ... „ 339
lucens, *Focke* ... „ 338
macilentus, *Camb.* ... „ 336
macrocarpus, Gard. ... ii 330, 331
macrocarpus, Kurz ... ii. 334
micranthus, D. Don ... „ 339
micropetalus, Gard. ... ii. 330, 331
microphyllus, D. Don ... ii. 340
moluccanus, *Linn.* ... „ 330
mysorensis, Heyne ... „ 339
niveus, *Wall.* ... „ 335
nutans, *Wall.* ... „ 334
opulifolius, *Bertol.* ... „ 340
oxyphyllus, Wall. ... „ 327
palmatus, Thunb. ... „ 342
paniculatus, *Sm.* ... „ 329
paniculatus, Clarke ... „ 342
paniculatus, Moon ... „ 336
paniculatus, Roxb. ... „ 342
parvifolius, Linn. ... „ 342
? *parvifolius*, Moon ... „ 339
parvifolius, Sm. ... „ 340
pauciflorus, Wall. ... „ 339
pedunculosus, D. Don ... „ 335
pentagonus, Wall. ... „ 332
pinnatus, Willd. ... „ 341
pulcherrimus, Hook. ... „ 333
pungens, *Camb.* ... „ 341
purpureus, *Bunge* ... „ 337
pyrifolius, Ham. ... „ 328
pyrifolius, Hk. f. & T. ... „ 328
racemosus, *Roxb.* ... „ 340
reflexus, Ker ... „ 330
reticulatus, Wall. ... „ 331
rosæflorus, Roxb. ... „ 339
rosæfolius, *Sm.* ... „ 341

Rubus Vol. Page
rotundifolius, Royle ... ... ii. 339
rotundifolius, Wall. ... ii. 336, 337
Roxburghianus, Wall. . ii. 342
Roylei, Klotz. ... ... „ 340
rugosus, Sm. ... ... „ 330
saxatilis, *Linn.* ... ... „ 333
sessilifolius, Miq. ... ... „ 336
sikkimensis, *Hk. f.* ... ... „ 336
sikkimensis, Kunze ... ... „ 341
sorbifolius, Maxim. ... ... „ 342
Thomsoni, *Focke* ... ... „ 332
tiliaceus, Herb. Str. & Wint. „ 331
tiliaceus, Sm. ... ... „ 329
Treutleri, *Hk. f.* ... ... „ 331
triflorus, Ham. ... ... „ 327
triflorus, Richards ... ... „ 332
uncatus, Wall. ... ... „ 336
Wallichianus, W. & A. ... „ 337
sp., Clarke ... ... „ 333
sp., Hk. f. & T. ... ... „ 332
Ruellia, *Linn.* ... ... iv. 411
aciculata, Roth ... ... „ 507
alata, Wall. ... ... iv. 471, 472
anisophylla, Wall. ... ... iv. 462
arcuata, Wall. ... ... „ 427
argentea, Wall. ... ... „ 454
aristata, Vahl ... ... „ 521
aspera, Nees ... ... „ 446
atropurpurea, Wall. ... ... „ 472
atroviridis, Wall. ... ... „ 495
attenuata, Wall. ... ... „ 414
auriculata, Wall. ... ... „ 453
balsamica, Linn. f. ... ... „ 404
barbata, Vahl ... ... „ 408
barlerioides, Roth ... ... „ 416
Beddomei, *Clarke* ... ... „ 413
Blumeana, Kurz ... ... „ 423
Blumeana, Nees ... ... „ 423
bracteata, Heyne ... ... „ 443
bracteata, Roxb. ... ... „ 416
bracteata, Wall. ... ... „ 460
Brunoniana, Wall. ... ... „ 457
callosa, Wall. ... ... „ 451
calycina, Wall. ... ... „ 469
canescens, Heyne ... ... „ 428
capitata, Wall. ... iv. 459, 460
Cephalotes, Wall. ... ... iv. 460
cernua, *Roxb.* ... ... „ 413
cernua, Anders ... ... „ 413
cernua, Heyne ... ... „ 404
cernua, Wall. ... ... „ 410
chelonoides, Wall. ... ... „ 494
ciliaris, Linn. ... ... „ 479
ciliata, *Hornem.* ... ... „ 413
ciliata, Heyne ... ... „ 437
ciliata, Wall. ... ... „ 440
collina, Wall. ... ... „ 465

Ruellia Vol. Page
colorata, Wall. ... ... iv. 473
comosa, Roxb. ... ... „ 430
? *comosa*, Wall.... ... ... „ 399
confinis, Nees ... ... „ 423
cordifolia, Vahl ... ... „ 428
coromandeliana, Wall. iv. 493, 494
crenata, Benth ... ... iv. 425
crispa, Linn. ... ... „ 446
crispa, Nees ... ... „ 423
Cusia, Ham. ... ... „ 468
cuspidata, Wall. ... ... „ 519
deccanensis, Grah. ... ... „ 412
denticulata, Wall. ... ... „ 465
dependens, Roxb. ... ... „ 521
depressa, Wall. ... ... „ 410
diffusa, Wall. ... ... „ 424
Digitalis, Koen. ... ... „ 493
divaricata, Wall. ... ... „ 469
dorsiflora, Retz. ... ... „ 417
dulcis, Wall. ... ... „ 520
dura, Nees ... ... „ 422
ebracteolata, Dalz. ... ... „ 424
elegans, Hook. ... ... „ 424
erecta, Burm. ... ... „ 410
erecta, Ham. ... ... „ 424
erecta, Roth ... ... „ 412
fasciculata, Retz. ... ... „ 522
fasciculata, Wall. ... ... „ 424
filiformis, Heyne ... ... „ 494
fimbriata, Wall. ... ... „ 447
flaccida, Kurz ... . „ 424
flagelliformis, Roxb.... ... „ 411
flava, Roxb. ... ... „ 426
flexuosa, Wall.... ... ... „ 460
glabra, Heyne... ... ... „ 414
? *glabrata*, Wall. ... ... „ 448
? glandulosa, *Roth* ... ... „ 414
glomerata, Wall. ... ... „ 448
glutinosa, Wall. ... ... „ 458
gossypina, Wall. ... ... „ 428
Griffithiana, Nees ... ... „ 425
hirsuta, Roxb. ... ... „ 408
hirta, D. Don ... ... „ 454
hirta, Vahl ... ... „ 422
imbricata, Vahl ... ... „ 417
incana, Heyne ... ... „ 408
indigofera, Griff. ... ... „ 468
indigotica, Fortune ... ... „ 468
infundibuliformis, Roxb. „ 492
? involucrata, *Vahl* ... ... „ 414
Jacquemontiana, Nees ... „ 458
Kunthiana, Wall. ... iv. 434, 496
lamiifolia, Wall. ... ... iv. 463
latebrosa, Dalz. & Gibs. ... „ 424
latebrosa, Roth ... ... „ 424
latebrosa, Roxb. ... ... „ 423
leptostachya, Wall. ... ... „ 542

Ruellia Vol. Page
littoralis, Linn. f. ... ... iv. 410
longifolia, *T. Anders.* ... ,, 412
longifolia, Roth ... ... ,, 407
longifolia, Roxb. ... ... ,, 409
lupulina, Wall. ... iv. 443, 444
macrocarpa, Wall. ... ... iv. 495
macrosiphon, *Kurz* ... ,, 413
maculata, Wall. ... ... ,, 457
mollissima, Klein ... ... ,, 408
? *montana*, Wall. ... ... ,, 487
mucronata, Wall. ... iv. 520, 521
mysurensis, Roth ... ... iv. 496
Nagchana, Ham. ... ... ,, 410
Neesiana, Wall. ... ... ,, 496
obovata, Roxb. ... ... ,, 408
Panichanga, Wall. ... ... ,, 473
? *paniculata*, Heyne ... ,, 409
paniculata, Linn. ... ... ,, 554
patula, *Jacq.* ... ... ,, 412
pauciflora, Wall. ... ... ,, 501
Pavala, Roxb. ... ... ,, 424
pectinata, Wall. ... ... ,, 447
pentsemonoides, Wall. ... ,, 460
persica, Burm. ... ... ,, 479
persicifolia, Griff. ... ... ,, 462
phlomoides, Wall. ... ... ,, 408
polysperma, Roth ... ... ,, 406
prostrata, *Lamk.* ... ... ,, 411
? *punctata*, Nees ... ... ,, 442
quadrangularis, Heyne ... ,, 494
quadrangularis, Wall. ... ,, 460
quadrifaria, Wall. ... ... ,, 425
quadrivalvis, Wall. ... ... ,, 408
racemosa, Heyne ... ... ,, 410
racemosa, Roxb. ... ... ,, 401
radicans, Wall. ... ... ,, 407
repens, *Linn.* ... ... ,, 412
repens, Heyne ... ... ,, 412
repens, Wall. ... ... iv. 412, 413
ringens, Roxb. ... ... iv. 412
rivinæfolia, Wall. ... ... ,, 533
rotundifolia, D. Don ... ,, 463
rubicunda, Heyne ... ... ,, 475
rufescens, Roth ... ... ,, 430
rupestris, T. Anders. ... ,, 424
Russelliana, Wall. ... ... ,, 427
Sabiniana, Wall. ... ... ,, 454
salicifolia, Vahl ... ... ,, 407
sarmentosa, Nees ... ... ,, 423
satpoorensis, Wawra ... ,, 424
scabra, Wall. ... ... iv. 437, 446
scariosa, Wall. ... ... iv. 520
secunda, Vahl ... ... ,, 493
sesamoides, Wall. iv. 428, 435, 436
spicata, Roth ... ... iv. 435
strobilina, Wall. ... ... ,, 454
subsericea, Wall. ... ... ,, 428

Ruellia Vol. Page
suffruticosa, *Roxb.* ... ... iv. 413
tentaculata, Linn. ... ... ,, 507
tomentosa, Wall. ... ... ,, 428
triflora, Nees ... ... ,, 404
triflora, Roxb. ... ... ,, 405
uliginosa, Linn. f. ... ... ,, 403
uliginosa, Wall. ... ... ,, 406
ulmifolia, Wall. ... ... ,, 430
undulata, Vahl ... ... ,, 408
urens, Heyne ... ... ,, 422
urophylla, Wall. ... ... ,, 472
urticifolia, Wall. ... ... ,, 464
varians, Vent. ... ... ,, 418
venosa, Heyne ... ... ,, 423
verticillata, Wall. ... ... ,, 404
Wightiana, Wall. ... ... ,, 412
zeylanica, Koen. ... ... ,, 493
sp., T. Anders. ... ... ,, 413
RUELLIEÆ ... ... iv. 388
Rumex, *Linn.* ... ... v. 58
Acetosa, *Linn.* ... ... ,, 60
Acetosella, *Linn.* ... ... ,, 61
acutus, Roxb. ... ... ,, 59
aquaticus, Linn. ... ... ,, 59
chinensis, Campd. ... ... ,, 59
comosus, Ham. ... ... ,, 59
conglomeratus, Murr. ... ,, 59
dentatus, *Linn.* ... ... ,, 59
dentatus, Wall. ... ... ,, 59
Dioscoridis, Heyne ... ... ,, 58
hamatus, Trev. ... ... ,, 60
hastatus, *D. Don* ... ... ,, 60
hastifolius, M. Bieb. ... ,, 60
Klotzschianus, Meissn. ... ,, 59
maritimus, *Linn.* ... ... ,, 59
nepalensis, *Spreng.* ... ... ,, 60
nigricans, *Hk. f.* ... ... ,, 59
obtusifolius, Ham. ... ... ,, 59
obtusifolius, Linn. ... ... ,, 60
orientalis, *Bernh.* ... ... ,, 58
palustris, Sm. ... ... ,, 59
Patientia, Linn. ... ... ,, 59
peregrinus, Boiss. ... ... ,, 60
pulcher, Linn. ... ... ,, 60
ramulosus, Meissn. ... ... ,, 60
Roxburghianus, Schult. f. ,, 60
Roxburghianus, Wall. ... ,, 59
scutatus, *Linn.* ... ... ,, 60
setaceus, Ham. ... ... ,, 59
tuberosus, Roxb. ... ... ,, 60
uncinatus, Hort. ... ... ,, 60
vesicarius, *Linn.* ... ... ,, 61
Wallichianus, Meissn. ... ,, 59
Wallichii, Meissn. ... ... ,, 59
sp., Strach. & Wint. ... ,, 59
RUMICEÆ ... ... v. 22
Rumphia, *Linn.* ... ... ii. 44

Rumphia ... Vol. Page
amboinensis, Linn. ... ... ii. 44
tiliæfolia, *Lamk.* ... ... ,, 44
Rungia, *Nees* ... ... iv. 545
apiculata, *Bedd.* ... ... ,, 548
Arnottiana, Wight ... ... ,, 546
Beddomei, *Clarke* ... ... ,, 549
Brandisii, *Clarke* ... ... ,, 549
crenata, *T. Anders.* ... ... ,, 547
elegans, *Dalz. & Gibs.* ... ,, 549
himalayensis, *Clarke* ... ,, 548
khasiana, *T. Anders.* ... ,, 548
læta, *Clarke* ... ... ,, 546
latior, *Nees* ... ... ,, 546
latior, Nees & T. Anders. ,, 547
linifolia, *Nees* ... . ,, 548
longifolia, *Nees & Arn.* ... ,, 547
longifolia, T. Anders. ... ,, 547
longifolia, Bedd. ... ... ,, 550
Mastersi, *T. Anders.* ... ,, 550
muralis, Nees ... ... ,, 550
origanoides, Nees ... ... ,, 550
parviflora, *Nees* ... ... ,, 550
pectinata, Nees ... ... ,, 550
polygonoides, Nees ... ... ,, 550
punduana, Nees ... ... ,, 527
repens, *Nees* ... ... ,, 549
repens, T. Anders. ... ... ,, 550
sisparensis, *T. Anders.* ... ,, 546
stolonifera, *Clarke* ... ... ,, 547
Wightiana, *Nees* ... ... ,, 546
sp. Hk. f. & T. ... ... iv. 547, 548
Ruppia, *Linn.* ... . vi. 568
maritima, Griff. ... ... ,, 568
rostellata, *Koch* ... ... ,, 568
subsessilis, Thw. ... ... ,, 567
Ruta, *Linn.* ... ... i. 485
albiflora, Hook. ... ... ,, 486
angustifolia, Pers. ... ... ,, 485
chalepensis, Wall. ... ... ,, 485
graveolens, Linn. ... ... ,, 485
japonica, Sieb. .. .. ,, 486
tuberculata, *Forsk.* ... ... ,, 485
sp. Aitch. ... ... ,, 486
RUTACEÆ ... ... i. 484
RUTEÆ ... ... i. 484
Ryckia furcata, De Vriese ... vi. 484
Rynchospora, *Vahl* ... ... vi. 668
? *anomala*, Steud. ... ... ,, 649
articulata, R. & S. ... ... ,, 670
aurea, *Vahl* ... ... ,, 670
ceylonica, Kunth ... ... ,, 670
chinensis, Boeck. ... ... ,, 672
chinensis, Nees ... ... ,, 671
glauca, *Vahl* ... ... ,, 671
glauca, Boeck. ... ... ,, 672
gracilis, Vahl ... ... ,, 671
gracillima, *Thw.* ... ... ,, 671

Rynchospora ... Vol. Page
Griffithii, *Boeck.* ... ... vi. 672
Hænkei, Presl ... ... ,, 663
Hookeri, *Boeck.* ... ... ,, 671
Kamphæveneri, Boeck. ... ,, 671
Kysoor, Dietr. ... ... ,, 669
lavarum, Hook. & Arn. ... ,, 672
laxa, Br. ... ... ,, 671
laxa, Thw. ... ... ,, 672
longisetis, *Br.* ... ... ,, 669
malasica, *Clarke* ... ... ,, 670
? mollis, *Wall.* ... ... ,, 672
Prescottiana, Wall. ... ... ,, 669
ruppioides, Benth. ... ... ,, 654
sikkimensis, *Clarke* ... ... ,, 672
triflora, *Vahl* ... ... ,, 670
Wallichiana, *Kunth* ... ,, 668
Wightiana, *Steud.* ... ... ,, 669
zeylanica, Thw. ... ... ,, 670
sp, Wall. ... vi. 695, 668, 670, 671
RYNCHOSPOREÆ ... ... vi. 586

Sabia, *Coleb.* ... ... ii. 1
campanulata, *Wall.* ... ,, 1
? *floribunda*, Miq. ... ... ,, 5
lanceolata, *Coleb.* ... ... ,, 2
leptandra, *Hk. f. & T.* ... ,, 2
limoniacea, *Wall.* ... ... ,, 3
malabarica, *Bedd.* ... ... ,, 2
Meniscosta, Bl. ... ... ,, 3
paniculata, *Edgew.* ... ... ,, 3
parviflora, *Wall.* ... ... ,, 2
parviflora, Wall. ... ... ,, 2
purpurea, *Hk. f. & T.* ... ,, 2
tomentosa, *Hk. f.* ... ... ,, 3
viridissima, *Kurz* ... ... ,, 3
SABIACEÆ ... ... ii. 1
Saccharum, *Linn.* ... ... vii. 118
aegyptiacum, Willd. ... ,, 119
Alopecurus, Nees ... ... ,, 107
arundinaceum, *Retz.* ... ,, 119
bengalense, Ham. ... ... ,, 119
? *benghalense*, Retz. ... ,, 119
biflorum, *Forsk.* ... ... ,, 119
Boga, Ham. ... ... ,, 119
brevifolium, Ham. ... ... ,, 98
brunneum, Desv. ... ... ,, 121
caducum, Tausch. ... ... ,, 119
canaliculatum, Roxb. ... ,, 119
Casi, Ham. ... ... ,, 119
caudatum, Mey. ... ... ,, 107
chinense, Nees ... ... ,, 119
ciliare, Anders. ... ... ,, 119
confertum, Presl ... ... ,, 107
contractum, H. B. K. ... ,, 107
cylindricum, Lamk. ... ,, 106
diandrum, Koen. ... ... ,, 106
dubium, H. B. K. ... ... ,, 107

Saccharum Vol. Page
europæum, Pers. ... ... vii. 106
exaltatum, Roxb. ... ... „ 119
fallax, Balans. ... ... „ 1[illegible]5
fastigiatum, Steud. ... ... „ 125
filifolium, Steud. ... ... „ 124
fuscum, *Roxb.* ... ... „ 120
Glaza, Reinw. ... ... „ 119
Griffithii, Munro ... vii. 120, 122
hirsutum, Forsk. ... ... vii. 16[illegible]
indum, Pers. ... ... „ 106
insulare, Brongn. ... ... „ 119
? *jaculatorium*, Lour. ... „ 107
jamaicense, Trin. ... ... „ 121
Klaga, Jungh. ... ... „ 119
Koenigii, Retz. ... ... „ 106
laguroides, Pourr. ... ... „ 106
Lola, Ham. ... ... „ 119
longifolium, Munro ... ... „ 125
macilentum, Chauv.... ... „ 107
Modhara, Ham. ... ... „ 120
Moonja, Royle ... ... „ 119
Munja, Roxb. ... ... „ 119
Narenga, *Ham.* ... ... „ 120
negrosense, Steud. ... ... „ 107
officinarum, *Linn.* ... ... „ 118
Palisotii, Tausch. ... ... „ 119
paniceum, Lamk. ... ... „ 141
procerum, Roxb. ... ... „ 119
propinquum, Steud. ... ... „ 119
punctatum, Schum. ... ... „ 119
Ravennæ, Bieb. ... ... „ 106
Ravennæ, Murr. ... ... „ 121
Ridleyi, *Hack.* ... ... „ 120
rufipilum, Steud. ... ... „ 123
rufum, Steud. ... ... „ 112
Sara, Aitch. ... ... „ 122
Sara, Roxb. ... ... „ 119
semidecumbens, Roxb. ... „ 119
sinense, Roxb. ... ... „ 118
speciosissimum, Tausch. . . „ 119
spicatum, Burm. ... ... „ 106
spicatum, Linn. ... ... „ 98
spontaneum, *Linn.* ... ... „ 118
spontaneum, Linn. ... ... „ 119
Surpata, Ham. ... ... „ 119
Teneriffæ, Linn. f. ... ... „ 65
Teneriffæ, Parl. ... ... „ 65
tennuis, Ham. ... ... „ 119
tridentatum, Spreng. ... „ 149
tristachyum, Steud. ... ... „ 112
sp., Wall. ... ... vii. 119, 120, 125
Saccolabium, *Bl.* ... ... vi. 54, 179
acaule, *Hk. f.* ... ... vi. 61
acuminatum, *Hk. f.*... ... „ 65
acuminatum, Thw. ... ... „ 67
acutifolium, *Lindl.* ... ... „ 61
ampullaceum, *Lindl.* ... „ 64

Saccolabium Vol. Page
bellinum, *Rchb. f.* ... ... vi. 61
Berkeleyi, Rchb. f. ... ... „ 33
bigibbum, *Rchb. f.* ... ... „ 61
bipunctatum, Par. & Rchb. f. „ 63
Blumei, Lindl. ... ... „ 32
brevifolium, *Lindl.* ... ... „ 57
buccosum, *Rchb. f.* ... ... „ 58
calceolare, *Lindl.* ... vi. 60, 197
calceolare, Paxt. ... ... vi. 61
carinatum, Griff. ... ... „ 63
Cephalotes, *Hk. f.* ... ... „ 63
clavatum, Lindl. ... vi. 66, 197
congestum, *Hk. f.* ... ... vi. 63
curvifolium, *Lindl.* ... ... „ 65
dasypogon, *Lindl.* ... ... „ 66
densiflorum, Lindl. ... ... „ 72
denticulatum, Paxt. ... ... „ 61
discolor, Rchb. f. ... ... „ 56
distichum, *Lindl.* ... ... „ 64
filiforme, *Lindl.* ... ... „ 53
flavum, *Hk. f.* ... ... „ 58
flexuosum, Lindl. ... ... „ 72
fragrans, *Par. & Rchb. f.* „ 58
galeatum, Gardn. ... ... „ 71
garwalicum, Lindl. ... ... „ 32
gemmatum, *Lindl.* (lapsu
geminatum) ... ... vi. 55, 197
giganteum, Lindl. ... ... vi. 53
gracile, *Lindl.* ... ... „ 57
Griffithii, Par. & Rchb. f. „ 77
guttatum, Lindl. ... ... „ 32
Heathii, Hort. ... ... „ 32
Helferi, *Hk. f.* ... ... „ 57
? inconspicuum, *Hk. f.* ... „ 56
intermedium, *Griff.* ... „ 61
Jerdonianum, *Rchb. f.* ... „ 59
lanatum, *Hk. f.* ... ... „ 60
lineare, Lindl. ... ... „ 47
lineolatum, Thw. ... ... „ 62
littorale, Rchb. f. ... ... „ 33
longifolium, *Hk. f.* vi. 6[illegible], 197
maculatum, *Hk. f.* ... ... vi. 64
micranthum, *Lindl.* ... ... „ 59
miniatum, Hook. ... ... „ 65
minimiflorum, *Hk. f.* ... „ 59
nilagiricum, *Hk. f.* ... ... „ 60
niveum, *Lindl.* ... ... „ 55
obliquum, *Lindl.* ... ... „ 61
obtusifolium, *Hk. f.*... ... „ 65
ochraceum, *Lindl.* ... ... „ 62
pallens, Lindl. ... ... „ 65
paniculatum, Wight ... ... „ 47
papillosum, *Lindl.* ... ... „ 63
papillosum, Dalz. & Gibs. „ 62
papillosum, Wight ... ... „ 63
parvulum, Lindl. ... ... „ 58
Pechéi, *Rchb. f.* ... ... „ 66

Saccolabium Vol. Page
penangianum, *Hk. f.* ... vi. 57
perpusillum, *Hk. f.* ... „ 56
præmorsum, *Hk. f.* ... „ 62
præmorsum, Lindl. ... „ 32
Pumilio, *Rchb. f.* ... „ 56
pusillum, Lindl. ... „ 57
racemiferum, Lindl. ... „ 68
ramosum, Lindl. ... „ 72
reflexum, Lindl. ... „ 49
retusum, Hort. ... „ 32
Rheedii, Wight ... „ 32
ringens, Lindl. ... „ 46
roseum, *Lindl.* ... „ 58
rostellatum, *Hk. f.* ... „ 59
rubrum, Lindl. ... „ 65
rubrum, Wight ... „ 46
speciosum, Wight ... „ 45
? *tenerum*, Lindl. ... „ 73
tenuicaule, *Hk. f.* ... „ 64
trichromum, *Rchb. f.* ... „ 65
undulatum, Lindl. ... „ 74
virescens, Gardn. ... „ 57
viridiflorum, *Lindl.* ... „ 63
Walkerianum, Rchb. f.
(lapsu Sarcanthus) ... „ 58
Wightianum, *Hk. f.* ... vi. 62, 197
Wightianum, Lindl. ... vi. 46
sp. Griff. ... „ 61
Saccopetalum, *Benn.* ... i. 88
longiflorum, *Hk. f. & T.* ... „ 88
? sclerocarpum, *Hk. f. & T.* „ 88
tomentosum, *Hk. f. & T.* „ 88
Sælanthus quadragonus, Forsk. i. 645
Sageræa Dalzellii, Bedd. ... i. 93
elliptica, Hk. f. & T. ... „ 92
laurina, Dalz. ... „ 93
Thwaitesii, Hk. f. & T. ... „ 92
Sageretia, *Brongn.* ... i. 641
Brandrethiana, *Aitch.* ... „ 642
corymbosa, G. Don ... „ 642
filiformis, G. Don ... „ 641
hamosa, *Brongn.* ... „ 641
oppositifolia, *Brongn.* ... „ 641
theezans, *Brongn.* ... „ 641
theezans, Brandis ... „ 642
sp. Wall. ... „ 641
Sagina, *Linn.* ... i. 242
ammannioides, Wall. ... „ 251
Linnæi, Presl ... „ 243
procumbens, *Linn.* ... „ 242
saxatilis, Wimmer ... „ 243
Sagittaria, *Linn.* ... vi. 561
cordifolia, Roxb. ... „ 561
Doniana, Sweet ... „ 561
guayanensis, *H.B.K.* ... „ 561
hastata, D. Don ... „ 561
hermaphrodita, Ham. ... „ 561

Sagittaria Vol. Page
Lappula, D. Don ... vi. 561
obtusifolia, Linn. ... „ 560
parviflora, Wall. ... „ 561
sagittifolia, *Linn.* ... „ 561
triandra, Dalz. ... „ 562
Sagotia triflora, Walp. & Duch. ... ii. 173
Saguerus Langkab, Bl. ... vi. 421
Rumphii, Roxb. ... „ 421
saccharifer, Wurmb. ... „ 421
Sagus farinifera, Gærtn. ... vi. 481
genuina, Bl. ... „ 481
inermis, Roxb. ... „ 481
? *Kœnigi*, Griff. ... „ 481
lævis, Rumph ... „ 481
Rumphii, Bl. ... „ 481
Rumphii, Willd. ... „ 481
? *Saivala vallisnerioides*, Wall. v. 661
sp., Jones ... „ 661
Sajorium corniculatum, Baill. v. 461
Salacia, *Linn.* ... i. 625
Brunoniana, *W. & A.* ... „ 626
? *chinensis*, Linn. ... „ 627
? *cochinchinensis*, Lour. ... „ 627
densiflora, Wall. ... „ 629
diandra, Thw. ... „ 627
Finlaysonii, Wall. ... „ 627
flavescens, *Kurz* ... „ 625
floribunda, *Wight* ... „ 629
fruticosa, *Heyne* ... „ 628
grandiflora, *Kurz* ... „ 626
Griffithii, *Laws.* ... „ 628
lævigata, Wight ... „ 624
latifolia, *Wall.* ... „ 629
Lobbii, *Laws.* ... „ 626
longifolia, *Hk. f.* ... „ 626
longifolia, Wall. ... „ 629
macrosperma, *Wight* ... „ 628
Maingayi, *Laws.* ... „ 626
membranacea, *Laws.* ... „ 627
memecyloides, Wall. ... „ 628
multiflora, *Wight* ... „ 627
oblonga, *Wall.* ... „ 628
oppositifolia, Rottl. ... „ 628
ovalis, *Laws.* ... „ 627
paniculata, Wall. ... „ 624
podopetala, Turcz. ... „ 626
pomifera, W. & A. ... „ 629
pomifera, Wall. ... „ 628
prinoides, *DC.* ... „ 626
reticulata, *Wight* ... „ 627
Roxburghii, *Wall.* ... „ 627
rubra, *Laws.* ... „ 627
terminalis, Thw. ... „ 624
verrucosa, *Wight* ... „ 628
? viminea, *Wall.* ... „ 627
Wightiana, Wall. ... „ 626

Vol. Page
SALICINEÆ ... ... v. 626
Salicornia, *Linn.* ... ... v. 12
  brachiata, *Roxb.* ... ... „ 12
  herbacea, Linn. ... ... „ 13
  indica, Willd. ... ... „ 12
SALICORNIEÆ ... ... v. 2
Salix, *Linn.* ... ... v. 626
  acmophylla, *Boiss.* ... ... „ 628
  acmophylla, Anderss. ... „ 628
  acutifolia, Willd. ... ... „ 631
  alba, *Linn.* ... ... „ 629
  angustifolia, *Willd.* ... „ 636
  apiculata, Anderss.... ... „ 627
  ? *Arbuscula*, Hk. f. & T. ... „ 631
  babylonica, *Linn.* ... ... „ 629
  cæsia, Vill. ... ... „ 637
  calophylla, Wall. .. ... „ 628
  calostachya, Anderss. ... „ 637
  calyculata, *Hk. f.* ... ... „ 635
  Caprea, *Linn.* ... ... „ 629
  clavata, Wall. ... ... „ 635
  cuspidata, Wall. ... ... „ 627
  Daltoniana, *Anderss.* ... „ 632
  daphnoides, *Villars* ... „ 631
  densa, Wall. ... ... „ 628
  denticulata, Anderss. ... „ 630
  disperma, D. Don ... ... „ 627
  divergens, *Anderss.* ... „ 637
  elegans, *Wall.* ... ... „ 630
  eriophylla, *Anderss.*... ... „ 633
  eriostachya, *Wall.* ... ... „ 633
  flabellaris, *Anderss.*... ... „ 634
  fragilis, *Linn.* ... ... „ 630
  fruticulosa, *Anderss.* ... „ 637
  glabrata, Heyne ... ... „ 473
  glabrescens, Lindl. ... ... „ 627
  glauca, Anderss. ... ... „ 628
  Govaniana, Wall. ... ... „ 630
  grisea, Wall. ... ... „ 629
  hastata, *Linn.* ... ... „ 630
  himalensis, Klotz. ... ... „ 630
  Horsfieldiana, Miq. ... ... „ 627
  Hugelii, Wimmer ... ... „ 627
  ichnostachya, *Lindl.* ... „ 628
  insignis, *Anderss.* ... ... „ 631
  kumaonensis, Lindl. ... „ 630
  lenta, Fries ... ... „ 627
  Lindleyana, *Wall.* ... ... „ 634
  longiflora, *Anderss.* ... ... „ 633
  longipes, Hk. f. & T. ... „ 634
  lucida, Jacq. ... ... „ 634
  myricæfolia, Anderss. ... „ 637
  Myrsinites, Linn. ... ... „ 634
  myrtillacea, *Anderss.* ... „ 637
  Myurus, Wimmer ... ... „ 627
  nilagirica, Miq. ... ... „ 627
  nobilis, Fries ... ... „ 628
Salix
  obovata, Wall. ... ... v. 634
  obscura, *Anderss.* ... v. 632, 637
  octandra, Del. ... ... v. 628
  oreophila, *Hk. f.* ... ... „ 635
  oxycarpa, *Anderss.* ... ... „ 636
  pondicheriana, Anderss. ... „ 628
  Pseudo-grisea, Steud. ... „ 629
  psilostigma, Anderss. ... „ 633
  purpurea, Linn. ... ... „ 636
  pycnostachya, *Anderss.* ... „ 636
  pyrina, Lindl. ... ... „ 627
  repens, Linn. ... ... „ 630
  retusa, Linn. ... ... „ 635
  rotundifolia, Royle ... ... „ 634
  sclerophylla, *Anderss.* ... „ 630
  secta, Hk. f. ... ... „ 635
  sericocarpa, *Anderss.* ... „ 637
  Serpyllum, *Anderss.* ... „ 634
  sikkimensis, *Anderss.* ... „ 632
  Smithiana, Willd. ... ... „ 632
  suaveolens, Anderss. ... „ 627
  Sufsuf, Forsk. ... ... „ 628
  tetrasperma, *Roxb.* ... ... „ 626
  Thomsoniana, *Anderss.* ... „ 635
  urophylla, *Lindl.* ... ... „ 637
  vagans, Hk. f. & T. ... ... „ 635
  viminalis, *Linn.* ... ... „ 631
  Wallichiana, *Anderss.* ... „ 628
  Wallichii, Wimm. ... ... „ 627
  Zollingeriana, Miq. ... ... „ 637
  zygostemon, Boiss. ... ... „ 636
  sp., Str. & Wint. v. 628, 630, 634
Salmalia malabarica, Schott. i. 349
Salomonia, *Lour.* ... ... i. 206
  ? *angulata*, Griff. ... ... „ 207
  aphylla, *Griff.* ... ... „ 207
  canarana, Hassk. ... ... „ 207
  cantoniensis, *Lour.* ... ... „ 206
  ciliata, *DC.* ... ... „ 206
  cordata, Arn. ... ... „ 206
  edentula, *DC.* ... ... „ 207
  ? *Horneri*, Hassk. ... ... „ 207
  leptostachya, Wall. ... ... „ 207
  oblongifolia, *DC.* ... ... „ 207
  obovata, Wight ... ... „ 207
  parasitica, Griff. ... ... „ 207
  petiolata, Ham. ... ... „ 207
  ? *rigida*, Hassk. ... ... „ 207
  sessiliflora, Ham. ... ... „ 207
  ? *setoso-ciliata*, Hassk. ... „ 207
  ? *stricta*, Sieb. & Zucc. ... „ 207
  subrotunda, Hassk. ... ... „ 206
  tenella, Hk. f. ... ... „ 207
  ? *uncinata*, Hassk. ... ... „ 207
  sp., Griff. ... ... „ 206
Salsola, *Linn.* ... ... v. 17
  cinerea, Waldst. & Kit. ... „ 10

- Salsola ... Vol. Page
  - collina, *C. A. Mey.* ... v. 17
  - *dendroides*, Pall. ... „ 18
  - *elata*, Wight ... „ 14
  - fœtida, *Del.* ... „ 18
  - *fruticosa*, Linn. ... „ 13
  - ? *fruticosa*, Wall. ... „ 14
  - *georgica*, Bunge ... „ 18
  - *indica*, Royle ... „ 18
  - *indica*, Wall. ... „ 13
  - *indica*, Willd. ... „ 14
  - ? *Jacquemontii*, Moq. ... „ 17
  - Kali, *Linn.* ... „ 17
  - *Lana*, Edgew. ... „ 13
  - *Lana*, Stocks ... „ 15
  - *Marosteum*, Moq. ... „ 18
  - *Moorcroftiana*, Wall. ... „ 18
  - *nudiflora*, Wall. ... „ 14
  - *nudiflora*, Willd. ... „ 14
  - *prostrata*, Linn. ... „ 10
  - *recurva*, Wall. ... „ 15
  - *salsa*, Jacq. ... „ 14
  - *sativa*, Wight ... „ 14
  - *sedoides*, Pall. ... „ 10
  - *spinescens*, Wight ... „ 18
  - *Stocksii*, Boiss. ... „ 15
  - *tamariscina*, Pall. ... „ 18
  - verrucosa, *M. Bieb.* ... „ 18
- SALSOLEÆ ... v. 2
- Salvadora, *Linn.* ... iii. 619
  - *indica*, Royle ... „ 620
  - *indica*, Wight ... „ 619
  - *madurensis*, Dcne. ... „ 620
  - oleoides, *Dcne.* ... „ 620
  - *oleoides*, Wall. ... „ 620
  - persica, *Linn.* ... „ 619
  - *persica*, T. And. ... „ 620
  - *persica*, Wall. ... i. 582
  - *Stocksii*, Wight ... iii. 620
  - *Wightiana*, Planch. ... „ 619
  - *sp.*, Wall. ... „ 620
- SALVADORACEÆ ... iii. 618
- Salvia, *Linn.* ... iv. 653
  - *abyssinica*, Br. ... „ 653
  - *acaulis*, Vahl ... „ 656
  - ægyptiaca, *Linn.* ... „ 656
  - asperata, *Falc.* ... „ 654
  - *bengalensis*, Roxb. ... „ 653
  - *brachiata*, Roxb. ... „ 655
  - *brachycalyx*, Boiss. ... „ 656
  - campanulata, *Wall.* ... „ 654
  - *cana*, Wall. ... „ 654
  - *coccinea*, Linn. ... „ 656
  - *dianthera*, Roth ... „ 653
  - dumetorum, *Andrz.* ... „ 655
  - *Gerardiana*, Benth. ... „ 656
  - glutinosa, *Linn.* ... „ 653
  - hians, *Royle* ... „ 653
- Salvia ... Vol. Page
  - *indica*, Linn. ... iv. 656
  - *integrifolia*, Hardw. ... „ 654
  - *japonica*, Thunb. ... „ 655
  - lanata, *Roxb.* ... „ 654
  - *lyrata*, Roxb. ... „ 656
  - *macrophylla*, Benth ... „ 653
  - *minutiflora*, Bunge ... „ 656
  - Moorcroftiana, *Wall.* ... „ 654
  - *nubicola*, Benth. ... „ 653
  - *ocimoides*, Roxb. ... „ 656
  - ? *parviflora*, Roxb. ... „ 655
  - plebeia, *Br.* ... „ 655
  - plectranthoides, *Griff.* ... „ 655
  - *pratensis*, Linn. ... „ 655
  - *pumila*, Benth. ... „ 656
  - santolinæfolia, *Boiss.* ... „ 656
  - saxicola, *Wall.* ... „ 655
  - *Schimperiana*, Hochst. ... „ 653
- Samadera, *Gærtn.* ... i. 518
  - indica, *Gærtn.* ... „ 519
  - lucida, *Wall.* ... „ 519
- *Samara floribunda*, Kurz iii. 513, 515
  - *frondosa*, King ... iii. 516
  - *læta*, Moon ... ii. 564
  - *microcalyx*, Kurz ... iii. 513
  - *Myrtillus*, Kurz ... „ 516
  - *parviflora*, Kurz ... „ 515
  - ? *picta*, Wall. ... „ 515
  - *Rheedii*, Wight ... „ 516
  - *Ribes*, Kurz ... „ 513
  - *robusta*, Kurz ... „ 515
  - *sessiliflora*, Kurz ... „ 513
  - *vestita*, Kurz ... „ 517
  - *viridiflora*, Thw. ... „ 516
- *Samaropyxis elliptica*, Miq. v. 377
- SAMBUCEÆ ... iii. 1
- Sambucus, *Linn.* ... iii. 2
  - adnata, *Wall.* ... „ 3
  - *chinensis*, Lindl. ... „ 2
  - Ebulus, *Linn.* ... „ 2
  - javanica, *Bl.* ... „ 2
  - *rubra*, Ham. ... „ 2
  - *Thunbergiana*, Miq. ... „ 2
  - *tiliæfolia*, Wall. ... ii. 748
  - *Wightianus*, Wall. ... iii. 2
  - *sp.*, Griff. ... „ 2
- SAMOLEÆ ... iii. 482
- Samolus, *Tournef.* ... iii. 506
  - Valerandi, *Linn.* ... „ 506
- *Samyda Piscidia*, Ham. ... ii. 593
- SAMYDACEÆ ... ii. 590
- *Sandalum album*, Rumph ... v. 231
- Sandoricum, *Cav.* ... i. 553
  - *borneense*, Miq. ... „ 554
  - emarginatum, *Hiern* ... „ 553
  - *glaberrimum*, Hassk. ... „ 553
  - indicum, *Cav.* ... „ 553

Sandoricum Vol. Page
Maingayi, *Hiern* ... ... i. 554
nervosum, Bl. ... ... „ 553
serratum, G. Don ... ... „ 553
ternatum, Blanco ... ... „ 553
Sanguisorba diandra, Wall. ii. 362
longifolia, Bertol. ... ... „ 363
Sanicula, *Linn.* ... ... ii. 670
elata, Ham. ... ... „ 670
europea, *Linn.* ... ... „ 670
hermaphrodita, Ham. ... „ 670
javanica, Bl. ... ... „ 670
montana, Reinw. ... ... „ 670
Sansevieria, *Thunb.* ... ... vi. 270
fruticosa, Bl. ... ... „ 327
Roxburghiana, *Schult.* ... „ 271
zeylanica, *Willd.* ... ... „ 270
zeylanica, Roxb. ... ... „ 271
SANTALACEÆ ... ... v. 228
Santalum, *Linn.* ... ... v. 231
album, *Linn.* ... ... „ 231
myrtifolium, Roxb. ... ... „ 231
verum, Linn. ... ... „ 231
Santia, W. & A. ... ... iii. 191
venulosa, W. & A. ... ... „ 191
Santia, Savi ... ... vii. 246
elongata, Parlat. ... ... „ 246
Santiria, *Bl.* ... ... i. 536
apiculata, *A. W. Benn.* ... „ 537
conferta, *A. W. Benn.* ... „ 537
costata. *A. W. Benn.* ... „ 537
fasciculata, *A. W. Benn.* „ 539
lævigata, *Bl.* ... ... „ 538
Maingayi, *A. W. Benn.* ... „ 538
multiflora, *A. W. Benn.* ... „ 538
Planchonii, *A. W. Benn.* „ 536
puberula, *A. W. Benn.* ... „ 537
tomentosa, Bl. ... ... „ 538
virgata, Bl. ... ... „ 539
Sapindacea, Br. ... ... „ 680
? *Sapindacea*, Griff. i. 676, 684, 687
Wall. ... ... i. 677, 679
SAPINDACEÆ ... ... i. 668
SAPINDEÆ ... ... i. 668
Sapindus, *Plum.* ... ... i. 682
abruptus, Lour. ... ... „ 683
abstergens, Roxb. ... ... „ 682
acuminatus, Wall. ... ... „ 684
acutus, Roxb. ... ... „ 682
acutus, Wall. ... ... „ 685
adenophyllus, Wall. ... i. 677, 685
alternifolius, Ham. ... „ 672, 685
angustifolius, Wall. ... i. 685
attenuatus, *Wall.* i. 684, 690, 691
benghalensis, Roxb. ... i. 685, 689
bifoliolatus, *Hiern* ... „ 684, 690
bijugus, Wall. ... ... „ 671, 685
Danura, *Voight* ... i. 684, 690, 691

Sapindus Vol. Page
deficiens, W. & A. ... i. 671, 685
detergens, Roxb. ... ... i. 683
detergens, Wall. ... ... „ 685
edulis, Ait. ... ... i. 685, 687
edulis Bl. ... ... „ 672, 635
emarginata, Vahl ... ... i. 682
erectus, *Hiern* ... ... i. 683, 690
fraxinifolius, DC. ... „ 672, 685
fruticosus, Roxb. ... „ 680, 635
fuscatus, Ham. ... ... „ 684, 685
glabratus, Wall. ... „ 685, 686
Glenici, Thw. ... ... „ 682, 635
indica, Poir. ... ... i. 685
laurifolia, Vahl ... i. 682, 685
lepidotus, Wall. ... „ 556, 685
longifolius, Ham. ... „ 672, 635
longifolia, Vahl ... ... i. 635
microcarpus, W. & A. i. 685, ii. 6
mollis, Bl. ... ... i. 685
monogyna, Herb. Heyne i. 685, 689
Mukorossi, *Gærtn.* ... „ 683, 635
multijugus, Wall. ... „ 552, 685
obovatus, W. & A. ... ... i. 685
pinnatus, Mill. ... i. 672, 635
pinnatus, Roxb. ... „ 672, 685
polyphyllus, Roxb. ... ... i. 685
Rarak, DC. ... ... i. 672, 685
rubiginosa, Roxb. ... „ 672, 685
Saponaria, Herb. Linn. ... i. 685
Saponaria, Lour. ... i. 672, 685
squamosus, Roxb. ... „ 676, 685
tetraphylla, Vahl ... „ 671, 685
Thwaitesii, *Hiern* ... „ 683, 691
travancorensis, Wall. „ 532, 685
trifoliatus, *Linn.* ... „ 682, 635
undulatus, Wall. ... ... i. 685
unijugus, Thw. ... ... i. 632, 685
Sapium, *P. Br.* ... . v. 469
baccatum, *Roxb* ... ... „ 470
Bingirium, Roxb. ... ... „ 471
cordifolium, Roxb. ... ... „ 421
Daidece, Ham. ... ... „ 470
discolor, *Muell.* ... ... „ 469
eugeniæfolium, *Ham.* ... „ 470
hexandrum, Ham. ... ... „ 470
Hookeri, Herb. Calc. ... „ 470
Hurmais, Ham. ... ... „ 471
indicum, *Willd.* ... ... „ 471
insigne, *Benth.* ... ... „ 471
populifolium, Wall. ... ... „ 470
sebiferum, *Roxb.* ... ... „ 470
sterculiacum, Wall. ... ... „ 372
virgatum, *Benth.* ... ... „ 471
Saponaria, *Linn.* ... ... i. 217
oxyodonta, Boiss. ... ... „ 217
perfoliata, Roxb. ... ... „ 217
Vaccaria, Boiss. ... ... „ 217

Saponaria ... Vol. Page
  Vaccaria, *Linn.* ... i. 217
Sapota armata, A. DC. ... iii. 538
  elengoides, A. DC. ... „ 538
  tomentosa, A. DC. ... „ 538
SAPOTACEÆ ... iii. 534
Sapotea, Griff. ... iii. 536
Sapria, *Griff.* ... v. 71
  Griffithii, Br. ... „ 71
  himalayana, *Griff.* ... „ 71
Saprosma, *Bl.* ... iii. 192
  ceylanicum, *Bedd.* ... „ 193
  consimile, *Kurz* ... „ 192
  corymbosum, *Bedd.* ... „ 194
  fragrans, *Bedd.* ... „ 193
  glomeratum, Bedd. ... „ 192
  indicum, *Dalz.* ... „ 192
  scabridum, *Bedd.* ... „ 193
  ternatum, *Hk. f.* ... „ 193
Saraca, *Linn.* ... ii. 271
  arborescens, Burm. ... „ 271
  cauliflora, *Baker* ... „ 272
  declinata, Miq. ... „ 272
  indica, *Linn.* ... „ 271
  Lobbiana, *Baker* ... „ 272
  macroptera, Miq. ... „ 272
  minor, Miq. ... „ 271
  palembanica, Miq. ... „ 272
  triandra, *Baker* ... „ 272
  Zollingeriana, Miq. ... „ 271
Sarcandra chloranthoides, Gardn. ... v. 100
Sarcanthus, *Lindl.* ... vi. 66, 179
  appendiculatus, *Hk. f.* ... vi. 67
  arietinus, *Rchb. f.* ... „ 70
  aspersus, *Rchb. f.* ... „ 70
  chrysomelas, *Rchb. f.* ... „ 70
  densiflorus, Par. & Rchb. f. „ 72
  erinaceus, *Rchb. f.* ... „ 69
  filiformis, *Lindl.* ... „ 66
  filiformis, Wight ... „ 56
  guttatus, Lindl. ... „ 32
  insectifer, *Rchb. f.* ... „ 68
  laxus, *Rchb. f.* ... „ 69
  lorifolius, *Par.* ... „ 69
  macrodon, *Rchb. f.* ... „ 70
  mirabilis, *Rchb. f.* ... vi. 58, 70
  oxyphyllus, *Wall.* ... vi. 70
  pallidus, *Lindl.* ... „ 68
  Parishii, *Hook.* ... „ 69
  pauciflorus, Wight ... „ 67
  peninsularis, *Dalz.* ... „ 67
  pugioniformis, Rchb. f. ... „ 70
  racemifer, Rchb. f. ... „ 68
  roseus, Wight ... „ 56
  Scortechinii, *Hk. f.* ... „ 68
  secundus, *Griff.* ... „ 67
  Stowellianus, Batem. ... „ 69
Sarcanthus ... Vol. Page
  teretifolius, Rchb. f. ... vi. 67
  tricolor, Rchb. f. ... „ 68
  Walkerianus, Wight ... „ 58
  Williamsoni, *Rchb. f.* ... „ 67
Sarcocephalus, *Afzel.* ... iii. 22
  Cadamba, Kurz ... „ 23
  cordatus, *Miq.* ... „ 22
  Horsfieldii, Miq. ... „ 22
  Junghuhnii, *Miq.* ... „ 23
  subditus, *Miq.* ... „ 22
Sarcochilus, *Br.* ... vi. 33, 178
  amplexicaulis, Rchb. f. ... vi. 40
  Arachnites, *Rchb. f.* ... „ 41
  aureus, *Hk. f.* ... „ 35
  Berkeleyi, *Rchb. f.* ... „ 37
  brachyglottis, *Hk. f.* ... „ 34
  brachystachys, *Hk. f.* ... „ 41
  cladostachys, *Hk. f.* ... „ 35
  complanatus, *Hk. f.* vi. 41, 197
  filiformis, *Hk. f.* ... „ 39, 196
  hirsutus, *Hk. f.* ... vi. 38
  hirtulus, *Hk. f.* ... „ 39
  hirtus, *Benth.* ... „ 35
  Hystrix, *Rchb. f.* ... „ 38
  leopardinus, *Par. & Rchb. f.* „ 38
  lilacinus, *Griff.* ... „ 40
  luniferus, *Benth.* ... „ 37
  maculatus, Benth. ... „ 64
  Mannii, *Hk. f.* ... „ 36
  merguensis, *Hk. f.* ... vi. 40, 196
  minimifolius, *Hk. f.* ... vi. 37
  muriculatus, *Rchb. f.* ... „ 34
  nepalensis, Spreng. ... „ 60
  notabilis, *Hk. f.* ... „ 42
  obtusus, *Benth.* ... „ 33
  pauciflorus, *Hk. f.* ... „ 41
  præmorsus, Spreng. ... „ 63
  pugionifolius, *Hk. f.* ... „ 196
  pulchellus, *Trim.* ... „ 39
  purpureus, *Benth.* ... „ 36
  recurvus, *Hk. f.* ... „ 39
  Roxburghii, *Hk. f.* ... „ 36
  Scopa, *Rchb. f.* ... „ 40
  Scortechini, *Hk. f.* ... „ 40
  serræformis, Rchb. f. ... „ 41
  Sillemianus, *Rchb. f.* ... „ 42
  stenoglottis, *Hk. f.* ... „ 34
  suaveolens, *Hk. f.* ... „ 33
  trichoglottis, *Hk. f.* ... „ 39
  Trimeni, Hk. f. ... vi. 40, 196
  usneoides, *Rchb. f.* ... vi. 37
  viridiflorus, *Hk. f.* ... vi. 38, 196
  Wightii, *Hk. f.* ... „ 37, 198
Sarcochlamys, *Gaud.* ... v. 588
  pulcherrima, *Gaud.* ... „ 588
Sarcoclinium Gaudichaudi, Baill. ... v. 406

Saroclinium Vol. Page
  Hookeri, Thw. ... ... v. 407
  longifolium, Wight ... ... „ 407
Sarcococca, *Lindl.* ... ... v. 266
  brevifolia, Muell. ... ... „ 267
  Hookeriana, Baill. ... ... „ 267
  pruniformis, *Lindl.* ... „ 266
  pruniformis, Thw. ... ... „ 267
  salicifolia, Baill. ... ... „ 266
  saligna, Muell. ... ... v. 266, 267
  sumatrana, Bl. ... ... v. 266
  trinervia, Wight ... ... „ 266
  zeylanica, Baill. ... ... „ 267
Sarcodiscus chloranthiformis, Griff. ... ... v. 114
Sarcolobus, *Br.* ... ... iv. 27
  carinatus, *Wall.* ... ... „ 28
  carinatus, Griff. ... ... „ 27
  globosus, *Wall.* ... ... „ 27
  sp., Griff. ... ... „ 28
Sarcopodium affine, Lindl. ... v. 756
  amplum, Lindl. ... ... „ 712
  fuscescens, Lindl. ... ... „ 712
  Griffithii, Lindl. ... ... „ 756
  leopardinum, Lindl. ... ... „ 756
  Lobbii, Lindl. ... ... „ 755
  macranthum, Lindl. ... „ 754
  pileatum, Lindl. ... ... „ 754
  psittacoglossum, Rchb. f. ... „ 754
  Reinwardtii, Lindl. ... ... „ 754
  striatum, Lindl. ... ... „ 755
  uniflorum, Lindl. ... ... „ 755
Sarcopyramis, *Wall.* ... ... ii. 540
  grandiflora, Griff. ... ... „ 541
  lanceolata, Wall. ... ... „ 541
  nepalensis, *Wall.* ... ... „ 541
Sarcosperma, *Hk. f.* ... ... iii. 535
  arboreum, *Benth.* ... ... „ 535
  Griffithii, *Benth.* ... ... „ 536
Sarcostemma, *Br.* ... ... iv. 26
  annulare, Roth ... ... „ 21
  brachystigma, Hook. ... „ 27
  brevistigma, *W. & A.* ... „ 26
  Brunonianum, *W. & A.* ... „ 27
  intermedium, *Dcne.* ... „ 27
  pyrotechnicum, Br. ... ... „ 64
  Stocksii, *Hk. f.* ... ... „ 27
  viminale, W. & A. ... ... „ 27
Sarcostigma, *W. & A.* ... ... i. 594
  edule, *Kurz* ... ... „ 594
  Kleinii, *W. & A.* ... ... „ 594
  Wallichii, *Baill.* ... ... „ 594
Sarcostigma eglandulosum, Wall. ... ... v. 342
Saribus cochinchinensis, Bl. vi. 435
Sarissus anceps, Gærtn. ... iii. 199
Sarosanthera lasiopetala, Thw. i. 283
Sassafras Parthenoxylon, Nees v. 136
Vol. Page
SATUREINEÆ ... ... iv. 605
Satyrium, *Sw.* ... ... vi. 168
  albiflorum, A. Rich. .. „ 168
  Epipogium, Linn. ... ... „ 124
  foliosum, Heyne ... ... „ 160
  nepalense, *D. Don* ... ... „ 168
  pallidum, A. Rich. ... ... „ 168
  Perrottetianum, A. Rich. „ 168
  repens, Linn. ... ... vi. 95, 112
  Wightianum, Lindl. ... ... vi. 168
Saurauja, *Willd.* ... ... i. 286
  cerea, *Griff.* ... ... „ 288
  crenulata, Wight ... ... „ 291
  fasciculata, *Wall.* ... ... „ 287
  ferruginea, Griff. ... ... „ 288
  Griffithii, *Dyer* ... ... „ 286
  leucophloia, Korth. ... ... „ 287
  macrotricha, *Kurz* ... ... „ 287
  media, Korth. ... ... „ 287
  micrantha, Griff. ... ... „ 288
  napaulensis, *DC.* ... i. 286, 496
  paniculata, Wall. ... ... i. 286
  punduana, *Wall.* ... ... „ 287
  Roxburghii, *Wall.* ... ... „ 287
  sterculifolia, Griff. ... ... „ 288
  tristyla, *DC.* ... ... „ 287
SAURAUJEÆ ... ... i. 279
Sauromatum, *Schott* ... ... vi. 508
  guttatum, *Schott* ... ... „ 508
  pedatum, Schott ... ... „ 508
  punctatum, C. Koch ... „ 508
  sessiliflorum, Kunth ... „ 508
  simlense, Schott ... ... „ 508
  venosum, Schott ... ... „ 508
Sauropus, *Bl.* ... ... v. 332
  albicans, *Bl.* ... ... „ 332
  assimilis, *Thw.* ... ... „ 333
  brevipes, *Muell.* ... ... „ 335
  Ceratogynum, Baill. ... „ 335
  compressus, *Muell.* ... ... „ 336
  forcipatus, *Hk. f.* ... ... „ 334
  Gardnerianus, Wight ... „ 332
  indicus, Wight ... ... „ 332
  lanceolatus, *Hk. f.* ... ... „ 333
  macrophyllus, *Hk. f.* ... „ 333
  oblongifolius, *Hk. f.* ... „ 333
  pubescens, *Hk. f.* ... ... „ 335
  quadrangularis, *Muell.* ... „ 335
  repandus, *Muell.* ... ... „ 334
  retroversus, *Wight* ... ... „ 333
  rigidus, *Thw.* ... ... „ 336
  stipitatus, *Hk. f.* ... ... „ 333
  trinervius, *Muell.* ... ... „ 334
  zeylanicus, Wight ... ... „ 332
SAURUREÆ ... ... v. 78
Saururus natans, Linn. ... vi. 564
Saussurea, *DC.* ... ... iii. 365

Saussurea Vol. Page
acanthocarpa, Schultz. ... iii. 378
acaulis, Klatt ... ... „ 367
affinis, *Spreng.* ... ... „ 373
albescens, *Hk. f. & T.* ... „ 374
Andersoni, *Clarke* ... ... „ 370
Atkinsoni, *Clarke* ... ... „ 367
bracteata, *Dcne.* ... ... „ 366
brahuica, Boiss. ... ... „ 373
cæspitosa, Wall. ... ... „ 369
candicans, *Clarke* ... ... „ 373
Candolleana, *Wall.* ... ... „ 372
Candolleana, Clarke ... „ 372
ceratocarpa, Dcne. ... ... „ 378
? *chenopodifolia*, Klatt ... „ 374
Clarkei, *Hk. f.* ... ... „ 372
conica, Clarke ... ... „ 366
deltoidea, *Clarke* ... ... „ 374
denticulata, *Wall.* ... ... „ 375
elliptica, *Clarke* ... ... „ 372
eriostemon, *Wall.* ... ... „ 370
Falconeri, *Hk. f.* ... ... „ 369
foliosa, *Hk. f.* ... ... „ 373
glanduligera, *Sch.* ... iii. 367, 371
gossypina, Wall. ... ... iii. 376
gossypiphora, *D. Don* ... „ 376
gossypiphora, Wall. ... .. „ 376
graminifolia, *Wall.* ... „ 370
hieracioides, *Hk. f.* ... „ 371
Hookeri, *Clarke* ... ... „ 371
hypoleuca, *Spreng.* ... ... „ 374
Jacea, *Clarke* ... ... „ 375
Kunthiana, *Clarke* ... ... „ 369
Lappa, *Clarke* ... ... „ 376
obvallata, *Wall.* ... ... „ 365
ovata, Benth. ... ... „ 372
peguensis, Clarke ... ... „ 375
piptathera, *Edgew.* ... ... „ 372
polystichoides, *Hk. f.* ... „ 369
pterocaulon, Dcne. ... ... „ 372
Roylei, *Clarke* ... ... „ 370
sacra, *Edgew.* ... ... „ 376
? *Schlagintweitii*, Klatt ... „ 366
Schultzii, *Hk. f.* ... ... „ 366
setifolia, Klatt ... ... „ 367
sorocephala, *Hk. f. & T.* „ 377
? *stemmaphora*, Klatt ... „ 378
Stoliczkai, *Clarke*... ... „ 368
subulata, *Clarke* ... ... „ 367
subulata, Clarke ... ... „ 367
Sughoo, *Clarke*... ... ... „ 368
taraxicifolia, *Wall.* ... ... „ 368
Thomsoni, *Clarke* ... ... „ 366
tridactyla, *Schultz.* ... „ 377
uniflora, *Wall.* ... ... „ 366
uniflora, Clarke... ... ... „ 370
wernerioides, *Schultz* ... „ 367
Yakla, *Clarke* ... . „ 368

Vol. Page
Savia Actephila, Hassk. ... v. 283
zeylanica, Baill. ... ... „ 283
Saxifraga, *Linn.* ... ... ii. 390
adoxoides, Griff. ... ... „ 401
aristulata, *Hk. f. & T.* ... „ 392
asarifolia, Sternb. ... ... „ 390
aspera, Willd. ... ... „ 397
aurea, Jacq. ... ... „ 397
brachypoda, *D. Don* ... „ 396
Brunoniana, *Wall.* ... ... „ 397
Brunonis, Wall. ... ... „ 397
cernua, *Linn.* ... ... „ 390
ciliata, Royle ... ... „ 398
cordigera, *Hk f. & T.* ... „ 391
corymbosa, *Hk. f. & T.* ... „ 393
diapensoides, Kurz ... ... „ 398
diversifolia, *Wall.* ... ... „ 393
evolvuloides, Wall. ... ... „ 396
filicaulis, *Wall.* ... ... „ 396
fimbriata, *Wall.* ... ... „ 396
flagellaris, *Willd.* ... ... „ 397
glandulifera, Jacquem. ... „ 395
glandulosa, Wall. ... ... „ 396
granulata, Linn. ... ... „ 390
hemisphærica, *Hk. f. & T.* „ 394
hirculoides, Dcne. ... ... „ 392
Hirculus, *Linn.* ... ... „ 392
hispidula, *D. Don* ... ... „ 396
Hoffmeisteri, Klotz. ... „ 397
imbricata, *Royle* ... ... „ 394
Jacquemontiana, *Dcne* ... „ 395
latiflora, *Hk. f. & T.* ... „ 392
ligulata, *Wall.* ... ... „ 398
Lychnitis, *Hk. f. & T.* ... „ 391
lysimachoides, Klotz. ... „ 393
micrantha, *Edgew.* ... ... „ 394
microphylla, *Royle* ... ... „ 395
Moorcroftiana, Wall. ... „ 393
mucronulata, Royle ... ... „ 397
myosotifolia, Pall. ... ... „ 397
nutans, *Hk. f. & T.* ... ... „ 393
odontophylla, *Hk. f. & T.* „ 390
odontophylla, Wall. ... ... „ 390
oppositifolia, *Linn.* ... ... „ 397
orientalis, Jacquem. ... „ 391
pallida, *Wall.* ... ... „ 394
palpebrata, *Hk. f. & T.* ... „ 391
parnassifolia, Wall. ... ... „ 393
perpusilla, *Hk. f. & T.* ... „ 395
pilifera, *Hk. f. & T.* ... „ 397
purpurascens, *Hk. f. & T.* „ 398
radicans, Jacquem. ... ... „ 397
ramulosa, *Wall.* ... ... „ 395
saginoides, *Hk. f. & T.* ... „ 392
setigera, Pursh ... ... „ 397
sibirica, *Linn.* ... ... „ 390
sibirica, Linn. ... ... „ 390

Saxifraga — Vol. Page
- *Stella-aurea*, Hk. f. & T.... ii. 395
- *stenophylla*, Royle ... ... „ 397
- Stracheyi, *Hk. f. & T.* ... „ 398
- strigosa, *Wall.* ... . , 393
- umbellulata, *Hk. f. & T.*... „ 395
- viscidula, *Hk. f. & T.* ... „ 391
- *Wallichiana*, Sternb. ... „ 396

SAXIFRAGACEÆ ... ... ii. 388
Saxifrageæ ... ... ii. 388
Scabiosa, *Linn.* ... ... iii. 218
- *Brunoniana*, Wall. ... ... „ 218
- Candolliana, *Wall.* ... ... „ 219
- *Candollii*, DC. ... ... „ 219
- Hookeri, *Clarke* ... ... „ 218
- Olivieri, *Coult.* ... ... „ 219
- speciosa, *Royle*... ... ... „ 219

Scabrita scabra, Linn. ... iii. 603
- *triflora*, Linn. ... ... „ 603

Scævola, *Linn.* ... ... iii. 421
- *Bela-Modagam*, R. & S. ... „ 421
- *chlorantha*, De Vr. ... ... „ 421
- Koenigii, *Vahl* ... ... „ 421
- *Lambertiana*, De Vr. ... „ 421
- *lativaga*, Hance ... ... „ 421
- *Leschenaultiana*, DC. ... „ 421
- Lobelia, *Linn.* ... ... „ 421
- *Lobelia*, Ham. ... ... „ 421
- *Macræi*, De Vr. ... ... „ 421
- *macrocalyx*, De Vr. ... ... „ 421
- *montana*, Lab. ... ... „ 421
- *Plumieri*, Bl. ... ... „ 421
- *Plumieri*, Vahl ... ... „ 421
- *senegalensis*, Presl ... ... „ 421
- *sericea*, Forst. ... ... „ 421
- *Sieberi*, De Vr. ... .. „ 421
- *Taccada*, Roxb. ... ... „ 421
- *Thunbergi*, Eckl. & Zey. „ 421
- *uvifera*, Stocks ... ... „ 421
- *velutina*, Presl ... ... „ 421

Scaligeria elata, Boiss. & Haussk. ... ... ii. 673
- *meifolia*, Boiss.... ... ... „ 673

Scandix, *Linn.* ... ... ii. 692
- Pecten Veneris, *Linn.* ... „ 692

Scapha Candolli, Chois. ... i. 287
- *pinangiana*, Chois. ... ... „ 287

Scaphespermum trilobum, Edgew. ... ... ii. 694
Scaphium Wallichii, Br. ... i. 361
Scaphochlamys, *Baker* ... vi. 252
- malaccana, *Baker* ... ... „ 252

Scepa Lindleyana, Wight ... v. 349
- *microstachya*, Tulasne ... „ 349
- ? *stipulacea*, Lindl. ... „ 349
- *villosa*, Lindl. ... ... „ 345

Schaueria graveolens, Hassk. iv. 630
Schedonorus asper, Gaud. ... vii. 358

Schedonorus — Vol. Page
- *Benekeni*, Lange ... ... vii. 358
- *bromoides*, W. & A. ... „ 358
- *inermis*, Beauv. ... ... „ 357
- *modestus*, Nees ... ... „ 354
- *serotinus*, Rostrup ... ... „ 358
- *transparens*, Munro ... „ 355
- *sp.*, Str. & Wint. ... ... „ 355

Schima, *Reinw.* ... ... i. 288
- crenata, *Korth.* ... ... „ 289
- *hypoglauca*, Miq. ... ... „ 289
- khasiana, *Dyer* ... ... „ 289
- mollis, *Dyer* ... ... „ 288
- *Noronhæ*, Reinw. ... ... „ 289
- Wallichii, *Chois.* ... ... „ 289
- *Wallichii*, Chois. ... „ 283

Schismatoglottis, *Zoll. & Moritz* ... ... vi. 537
- brevicuspis, *Hk. f.* ... ... „ 537
- brevipes, *Hk. f.* ... ... „ 538
- *calyptrata*, Zoll. & Moritz „ 539
- elongata, *Engl.* ... ... „ 539
- Kurzii, *Hk. f.* ... ... „ 539
- longipes, *Miq.* ... ... „ 538
- minor, *Hk. f.* ... ... „ 538
- mutata, *Scort.* ... ... „ 538
- Scortechini, *Hk. f.* ... ... „ 537
- Wallichii, *Hk. f.* ... ... „ 537

Schismus, *Beauv.* ... ... vii. 335
- *calycinus*, C. Koch ... ... „ 336
- *hirsutus*, Trin. ... ... „ 336
- marginatus, *Beauv.* ... ... „ 336

Schizachyrium, Benth. ... vii. 165
- *brevifolium*, Nees ... ... „ 165
- *hirtiflorum*, Nees ... ... „ 167
- *semiberbe*, Nees ... ... „ 167
- *zeylanicum*, Arn. ... ... „ 167

Schizandra, *Michx.* ... ... i. 44
- axillaris, *Hk. f. & T.* ... „ 45
- elongata, *Hk. f. & T.* ... „ 44
- grandiflora, *Hk. f. & T.* ... „ 44
- propinqua, *Hk. f. & T.* ... „ 45

SCHIZANDREÆ ... ... i. 39
Schizocalyx coriaceus, Hochst. iii. 619
Schizochiton, ? Wall. ... ... i. 551
Schizolepis, Nees ... ... vi. 694
Schizonephros glaucescens, Griff. ... ... v. 79
Schizostachyum, *Nees* ... vi. 415
- aciculare, *Gamble* ... ... „ 417
- Blumei, *Nees* ... ... „ 416
- chilianthum, *Kurz* ... ... „ 416
- *Durie*, Rupr. ... ... „ 395
- ? *elegantissimum*, Kurz ... „ 416
- *hindostanicum*, Kurz ... „ 403
- latifolium, *Gamble* ... ... „ 416
- *longispiculatum*, Kurz ... „ 417
- tenue, *Gamble* ... ... „ 415

Vol. Page
Schizostigma, *Arn.* ... ... iii. 100
hirsutum, *Arn.* ... ... „ 100
Schleichera, *Willd.* ... ... i. 681
pentapetala, Roxb. ... i. 678, 681
pubescens, Roth ... ... i. 681
trijuga, *Willd.* ... ... „ 681
trijuga, Moritz ... ... i. 678, 681
Schmidelia acuminata, Thw. i. 673
adenophylla, Wall. ... ... „ 674
Aporetica, Wall. ... ... „ 674
Allophyllus, DC. ... ... „ 673
bidentata, Wall. ... ... „ 673
Cobbe, DC. ... ... „ 674
cochinchinensis, DC. ... „ 674
dentata, Wall. ... ... „ 674
distachya, DC. ... ... „ 674
fœtidissima, Wall. ... ... „ 674
Gemella, Camb. ... ... „ 674
glabra, Wall. ... ... „ 674
hispida, Thw. ... ... „ 673
integerrima, Wall. ... i. 488, 674
Kobbe, Lamk. ... ... i. 674
orientalis, Sw. ... ... „ 674
racemosa, Linn. ... ... „ 674
Rheedii, Wight ... ... „ 674
serrata, DC. ... ... „ 674
ternata, Camb. ... ... „ 674
timorensis, DC. ... ... „ 674
varians, Thw. ... ... „ 673
vestita, Wall. ... ... „ 674
villosa, Roxb. ... ... „ 670
villosa, Wight ... ... „ 674
sp., Hk. f. & T. ... ... „ 673
sp., Wall. ... ... „ 674
Schmidia bicolor, Wight ... iv. 393
Schoberia corniculata, C. A. Mey. ... ... v. 14
indica, Bunge ... ... „ 13
maritima, C. A. Mey. ... „ 14
microsperma, C. A. Mey. „ 15
Schœnefeldia gracilis, Kunth vii. 289
pallida, Edgew. ... ... „ 289
Schoenorchis, Bl. ... ... vi. 54, 179
juncifolia, Thw. ... ... vi. 56
Schœnus, *Linn.* ... ... vi. 672
articulatus, Buch. ... ... „ 671
articulatus, Roxb. ... ... „ 670
calostachyus, *Poir.* ... ... „ 673
coloratus, Linn. ... ... „ 588
compressus, Linn. ... ... „ 660
cyperoides, Retz. ... ... „ 649
gracilis, Sw. ... ... „ 672
Haskarlii, Steud. ... ... „ 677
junceus, Willd. ... ... „ 656
lithospermus, Linn. ... ... „ 685
longisetis, Poir. ... ... „ 669
Mariscus, Linn. ... ... „ 674

Schœnus Vol. Page
nigricans, *Linn.* ... ... vi. 673
niveus, Linn. ... ... „ 620
paniculatus, Hassk. ... „ 677
polymorphus, Rottb. ... „ 639
puberulus, C. A. Mey. ... „ 649
ruber, Lour. ... ... „ 668
rufus, Huds. ... ... „ 661
surinamensis, Rottb. ... „ 670
Schœpfia, *Schreb.* ... ... i. 581
acuminata, *Wall.* ... ... „ 582
fragrans, *Wall.* ... ... „ 581
odorata, Wall. ... ... „ 581
Schollia (Scholera) crassifolia, Jacq. ... ... iv. 62
Schrebera, *Roxb.* ... ... iii. 604
pubescens, Kurz ... ... „ 604
swietenioides, *Roxb.* ... „ 604
Schrebera, Retz. ... ... i. 623
albens, Willd. ... ... „ 623
Schultzia, *Spreng.* ... ... ii. 697
? Benthami, *Clarke* ... ... „ 697
? *Lindleyi*, Wall. ... ... „ 701
Schumacheria, *Vahl* ... ... i. 34
alnifolia, *Hk. f. & T.* ... „ 34
angustifolia, *Hk. f. & T.* „ 34
castaneæfolia, *Vahl* ... „ 35
Schweinfurthia, *A. Braun* iv. 252
papilionacea, Boiss. ... „ 252
sphærocarpa, *A. Braun* ... „ 252
Sciadicarpus Brongniartii, Hassk. ... ... ii. 114
Sciadophyllum ellipticum, Bl. ii. 729
Sciaphila, *Bl.* ... ... vi. 558
erubescens, *Miers* ... ... „ 558
janthina, *Thw.* ... ... „ 558
khasiana, *Hk. f.* ... ... „ 559
secundiflora, *Thw.* ... ... „ 558
Scilla, *Linn.* ... ... vi. 348
cernua, var. ... ... „ 349
coromandeliana, Roxb. ... „ 347
Cundria, Ham. ... ... „ 347
denudata, Ham. ... ... „ 347
Hohenackeri, *Fisch. & Mey.* „ 349
indica, *Baker* ... ... „ 348
indica, Roxb. ... ... „ 347
maculata, Baker ... ... „ 348
serotina, Ker ... ... „ 346
SCILLEÆ ... ... vi. 301
Scindapsus, *Schott* ... ... vi. 541
argyræa, Engl. ... ... „ 541
Beccarii ? *Engl.* ... ... „ 542
caudatus, Engl. ... ... „ 549
caudatus, Schott ... ... „ 549
crassipes ? *Engl.* ... ... „ 542
Cuscuaria, *Presl* ... ... „ 542
decursivus, Schott ... ... „ 547
giganteus, Schott ... ... „ 541

Scindapsus Vol. Page
glaucus, Schott ... ... vi. 547
hederaceus, *Schott* ... ... „ 542
inquinatus, Schott ... ... „ 542
marantæfolius, Miq. ... „ 543
medius, Zoll. & Moritz ... „ 540
montanus, Kunth ... ... „ 540
officinalis, *Schott* ... ... „ 541
Peepla, Schott ... ... „ 545
Peepla, Thw. ... ... „ 547
perakensis, *Hk. f.* ... ... „ 542
pertusus, Schott ... ... „ 547
pictus, *Hassk.* ... ... „ 541
pinnatifidus, Schott ... „ 549
pinnatus, Schott ... ... „ 549
pothoides, Miq. ... ... „ 542
pothoides, Schott ... ... „ 541
Scortechinii, *Hk. f.* ... ... „ 541
SCIRPEÆ ... ... vi. 586
Scirpodendron, *Kurz* ... ... vi. 684
costatum, *Kurz* ... ... „ 684
sulcatum, Miq. ... ... „ 684
Scirpus, *Linn.* ... ... vi. 653
acicularis, Linn. ... ... „ 629
acutangulus, Roxb. ... ... „ 627
æmulans, Steud. ... ... „ 660
æstivalis, Retz. ... ... „ 637
æstivalis, Wall. ... ... „ 635
affinis, Roth ... ... „ 659
afflatus, Benth. ... ... „ 629
alpinus, Schl. ... ... „ 654
anceps, Willd. ... ... „ 646
annuus, All. ... ... „ 636
annuus, Host ... ... „ 636
anomalus, Retz. ... ... „ 678
antarcticus, Thunb. ... ... „ 651
argenteus, Rottb. ... ... „ 640
aristatus, Willd. ... ... „ 666
articulatus, *Linn.* ... ... „ 656
arvensis, Retz. ... ... „ 639
arvensis, Roxb. ... . „ 636
atropurpureus, Retz. ... „ 627
Bæothryon, Ehrh. ... ... „ 654
Balna, Ham. ... ... „ 659
bangalorensis, Heyne ... „ 657
barbatus, Boeck. ... ... „ 653
barbatus, Rottb. ... ... „ 651
benghalensis, Pers. ... ... „ 644
bispicatus, Roxb. ... ... „ 634
brevifolia, Dcne. ... ... „ 660
brevifolius, Roxb. ... ... „ 636
cæspitosus, Boeck. ... ... „ 654
canaliculato-triqueter,
Steud. ... ... „ 660
capillaris, Linn. ... ... „ 652
capitatus, Burm. ... ... „ 666
capitatus, Linn. ... ... „ 628
Caricis, *Retz.* ... ... „ 660

Scirpus Vol. Page
carinatus, Sowerb. ... ... vi. 658
Cephalotes, Jacq. ... ... „ 589
cernuus, Vahl ... ... „ 655
chinensis, *Munro* ... vi. 662, 678
ciliaris, Linn. ... ... vi. 666
cinnamometorum, Vahl ... „ 650
comosus, Wall. ... ... „ 664
complanatus, Retz. ... ... „ 646
compressus, Pers. ... ... „ 660
confervoides, Poir. ... ... „ 654
congestus, Spreng. ... ... „ 630
coniferus, Poir. ... ... „ 684
coronarius, Vahl ... ... „ 619
corymbosus, *Heyne* ... ... „ 657
corymbosus, Forsk. ... ... „ 659
corymbosus, Linn. ... ... „ 670
cuspidatus, Roth ... ... „ 665
cyperoides, Linn. ... ... „ 622
debilis, Pursh ... ... „ 656
densus, Wall. ... ... „ 652
dichotomus, Linn. ... ... „ 636
diphyllus, Retz. ... ... „ 636
dipsaceus, Rottb. ... ... „ 635
dissitus, Duthie ... ... „ 661
Donianus, Spreng. ... ... „ 663
? *dubius*, Roxb. ... ... „ 625
Duvallii, Hoppe ... ... „ 658
echinatus, Linn. ... ... „ 621
elongatus, Ham. ... ... „ 664
erectus, *Poir.* ... ... „ 656
Eriophorum, *Mich.* ... ... „ 661
falcatus, Vahl ... ... „ 647
ferrugineus, Linn. ... ... „ 639
fimbrisetus, Delile ... ... „ 659
fistulosus, Forsk. ... ... „ 656
fistulosus, Poir. ... ... „ 627
fluitans, *Linn.* ... ... „ 653
fuscus, Roxb. ... ... „ 639
globulosus, Retz. ... ... „ 645
globulosus, Roxb. ... ... „ 639
glomeratus, Heyne ... ... „ 602
glomeratus, Linn. ... ... „ 620
glomeratus, Retz. ... ... „ 640
glomeratus, Roxb. ... ... „ 636
gracillimus, Boeck. .. ... „ 652
Griffithii, Boeck. ... ... „ 660
grossus, *Linn. f.* ... ... „ 659
hakonensis, Franch. & Sav. „ 630
hemisphæricus, Roth ... „ 667
Holoschœnus, *Linn.* ... „ 655
inclinatus, Delile ... ... „ 657
incurvatus, Roxb. ... ... „ 656
Isolepis, *Boeck.* ... ... „ 663
javanus, Nees ... ... „ 657
junciformis, Nees ... ... „ 656
juncoides, Roxb. ... ... „ 656
kyllingioides, *Boeck.* ... „ 662

Scirpus — Vol. Page
  Kysoor, Roxb. ... ... vi. 660
  lacustris, *Linn.* ... ... „ 658
  lateralis, Heyne ... ... „ 656
  Lawianus, Boeck. ... .. „ 648
  laxiflorus, Thw. ... ... „ 626
  lithospermus, Linn. ... ... „ 685
  littoralis, *Schrad.* ... ... „ 659
  luzonensis, Presl ... ... „ 656
  macrostachys, Boeck. ... „ 659
  maritimus, *Linn.* ... ... „ 658
  maritimus, Maxim. ... ... „ 659
  maximus, Roxb. ... ... „ 659
  medius, Roxb. ... ... „ 627
  melanospermus, C. A. Mey. ... ... „ 655
  Meyenii, Nees ... ... „ 658
  Michelianus, *Linn.* ... vi. 596, 662
  miliaceus, Burm. ... ... vi. 644
  miliaceus, Linn. ... ... „ 644
  miliaceus, Roxb. ... ... „ 636
  minimus, Roxb. ... ... „ 635
  mollis, Wall. ... ... „ 672
  monander, Rottb. ... ... „ 640
  monander, Roxb. ... ... „ 651
  monostachyus, Kœn. ... „ 634
  mucronatus, *Linn.* ... ... „ 657
  mucronatus, Roxb. ... ... „ 656
  mutatus, Roxb.... ... ... „ 627
  muticus, D. Don ... ... „ 657
  mysurensis, Heyne ... ... „ 657
  nutans, Retz. ... ... „ 632
  Onaei, Franch. & Sav. ... „ 630
  ovatus, Roth ... . „ 628
  pallescens, Roxb. ... ... „ 636
  palustris, Linn. ... ... „ 628
  pauciflorus, *Lightf.* ... ... „ 654
  pectinatus, Roxb. ... ... „ 659
  pentagonus, Roxb. ... ... „ 644
  petasatus, Maxim. ... ... „ 630
  pilosus, Retz. ... ... „ 666
  plantagineus, Retz. .. ... „ 625
  plantagineus, Roxb. ... „ 626
  plantaginoides, Rottb. ... „ 625
  plumosus, Br. ... ... „ 659
  Pollichii, Gren. & Godr.... „ 658
  polytrichoides, Retz. ... „ 632
  prælongatus, Poir. ... ... „ 656
  puberulus, Boeck. ... ... „ 651
  puberulus, Poir. ... ... „ 653
  pubescens, Lam. ... ... „ 665
  pumilus, *Vahl* ... ... „ 654
  quadrangulus, *D. Don* ... „ 663
  quinquangularis, Boeck. „ 645
  quinquangularis, Vahl ... „ 644
  quinquefarius, *Ham.* ... „ 657
  riparius, Presl ... ... „ 658
  rufus, *Schrad.* ... ... „ 661

Scirpus — Vol. Page
  Salbundius (Saibundius), Ham. ... ... vi. 644
  Savii, Seb. & Maur. ... ... „ 655
  scaber, Roxb. ... ... „ 631
  scaberrimus, Boeck. ... „ 660
  schœnoides, Retz. ... ... „ 634
  schœnoides, Roxb. ... ... „ 649
  setaceus, *Linn.* ... ... „ 654
  spiralis, Rottb.... ... ... „ 627
  squarrosus, *Linn.* ... ... „ 663
  strictus, Roxb. ... ... „ 640
  strobilinus, Roxb. ... ... „ 659
  subarticulatus, Roxb. ... „ 656
  subcapitatus, *Thw.* ... ... „ 661
  submersus, *Sauv.* ... ... „ 653
  subulatus, Aitch. ... ... „ 658
  ? *subulatus*, Prain ... ... „ 658
  subulatus, Vahl ... ... „ 659
  sundanus, Miq. ... ... „ 657
  supinus, *Linn.* ... ... „ 655
  sylvaticus, Strach. ... ... „ 662
  Tabernæmontani, Gmel. ... „ 658
  tenellus, Roxb.... ... ... „ 642
  ternatanus, Reinw. ... ... „ 662
  ternatus, Ham. ... ... „ 656
  tetragonus, Poir. ... ... „ 644
  Thwaitesii, Boeck. ... ... „ 652
  timorensis, Kunth ... ... „ 656
  tranquebariensis, Roth ... „ 639
  trialatus, Boeck. ... ... „ 605
  triangulatus, Roxb. ... ... „ 657
  tridentatus, Roxb. ... ... „ 659
  trifidus, Hance ... ... „ 652
  triflorus, Poir. ... ... „ 670
  triqueter, *Linn.* ... ... „ 658
  triqueter, Gren. & Godr. „ 659
  tristachyus, Roxb. ... ... „ 639
  tumidus, Roxb. ... ... „ 626
  umbellaris, Lam. ... ... „ 645
  uncinatus, Willd. ... ... „ 666
  uniglumis, Link ... ... „ 628
  validus, Vahl ... ... „ 658
  Wallichii, Nees... ... ... „ 656
  Wichurai, Boeck. ... ... „ 661
  Wichurai, Franch. & Sav. „ 630
  Wightianus, Boeck.... ... „ 653
  sp., Rottb. ... ... „ 600
  sp., Wall. ... ... vi. 6 6, 657, 660
Scitaminea Finlaysoniana, Wall. ... ... vi. 203
SCITAMINEÆ ... ... vi. 198
Sclerachne punctata, Br. ... vii. 102
Scleria, *Berg.* ... ... vi. 685
  alata, Moon ... ... „ 689
  alta, *Boeck.* ... ... „ 690
  androgyna, Nees ... ... „ 686
  annularis, *Kunth* ... ... „ 687

Scleria Vol. Page
aspera, Boeck. ... vi. 691
axillaris, Moon ... , 688
bancana, *Miq.* ... ,, 693
biflora, *Roxb.* ... ,, 687
bracteata, *Cav* ... ,, 694
caricina, *Benth.* ... ,, 688
ceylanica, Kunth ... ,, 688
chinensis, *Kunth* ... ,, 690
ciliaris, Nees ... ,, 690
corymbifera, Boeck. ... ,, 686
corymbosa, *Roxb.* ... ,, 686
elata, *Thw.* ... ,, 690
elata, Thw. ... ,, 690
exaltata, Boeck. ... ,, 690
flaccida, *Clarke* ... ,, 688
Hasskarliana, Boeck. vi. 690, 692
hebecarpa, *Nees* ... vi. 689
hebecarpa, Thw. ... ,, 688
hirsuta, Moon ... ,, 692
Hookeriana, *Boeck.* ... ,, 691
junciformis, *Thw.* ... ,, 692
khasiana, *Clarke* ... ,, 692
khasiana, Boeck. ... vi. 689 692
lævis, Willd. ... vi. 694
lateriflora, Boeck. ... ,, 688
latifolia, Moon ... ,, 691
laxa, R. Br. ... ,, 688
levis, *Retz.* ... ,, 694
lithosperma, *Sw.* ... ,, 685
lithosperma, Roxb. ... ,, 690
macrocarpa, Wall. ... ,, 684
macrophylla, Presl ... ,, 693
majus, Moon ... ,, 686
malaccensis, Boeck. ... ,, 693
melanosperma, Nees & Arn. ,, 692
melanostoma, *Boeck.* ... ,, 692
multifoliata, *Boeck.* ... ,, 693
Neesii, *Kunth* ... ,, 688
orizoides, Boeck. ... ,, 691
oryzoides, *Presl* ... ,, 691
pandanophylla, Kurz ... ,, 714
parvula, Steud. ... ,, 687
pergracilis, *Kunth* ... ,, 685
pilosa, Boeck. ... ,, 692
Plæmii, Boeck. ... ,, 692
propinqua, Steud. ... ,, 686
psilorrhiza, *Clarke* ... ,, 691
pubescens, Steud. ... ,, 689
pubescens, Zoll. ... ,, 693
purpurascens, Steud. ... ,, 693
Radula, *Hance* ... ,, 691
Ridleyi, *Clarke* ... ,, 686
Rinkiana, Boeck. ... ,, 694
rugosa, Br. ... ,, 688
scrobiculata, Moritz ... ,, 690
scrobiculata, Zoll. ... ,, 689
setigera, Roxb. ... ,, 693

Scleria Vol. Page
Steudeliana, Miq ... vi. 687
stipularis, Thw. ... ,, 689
Stocksiana, *Boeck.* ... ,, 687
stricta, Moon ... ,, 689
sumatrensis, *Retz.* ... ,, 693
tenuis, Retz. ... ,, 685
tessellata, *Willd.* ... vi. 686, 694
tessellata, Benth. ... vi. 687
tessellata, Hk. f. & T. ... ,, 687
Thomsoniana, *Boeck.* ... ,, 689
Thwaitesiana, Boeck. ... ,, 688
uliginosa, Boeck. ... ,, 687
vestita, Boeck. ... ,, 689
villosula, Wall. ... ,, 689
Wightiana, Steud. ... ,, 685
zeylanica, *Poir.* ... ,, 687
zeylanica, Moon ... ,, 694
sp., Hk. f. & T. vi. 689, 691, 692, 694
sp., Wall. ... vi. 685, 686, 687,
689, 690, 693, 694
SCLERIEÆ ... vi. 587
Sclerocarpus, *Jacq.* ... iii. 305
africanus, *Jacq.* ... ,, 305
Sclerochloa, *Beauv.* ... vii. 335
dura, *Beauv.* ... ,, 335
Scleromitrion, W. & A. ... iii. 60
cæspitosum, Miq. ... ,, 60
hispidum, Korth. ... ,, 61
rigidum, Kurz ... ,, 60
tenelliflorum, Korth. ... ,, 60
tetrandum, Kurz ... ,, 54
tetraquetrum, Miq. ... ,, 60
Sclerophyllum coarctatum, Griff. ... vii. 93
Scleropyrum, *Arn.* ... v. 234
Maingayi, *Hk. f.* ... ,, 235
Wallichianum, *Arn.* ... ,, 234
Sclerostylis Arnottiana, Wight i. 513
atalantioides, W. & A. ... ,, 508
atalantioides, Wight ... ,, 512
ovalifolia, Wight ... ,, 512
parvifolia, Wight ... ,, 512
racemosa, Wight ... ,, 512
rotundifolia, Thw. ... ,, 513
Roxburghiana, Hk. f. & T. ,, 513
Roxburghii, Wight ... ,, 513
zeylanica, Wight ... ,, 513
Scolochloa arundinacea, Mert. & Koch ... vii. 303
Scolopia, *Schreb.* ... i. 190
acuminata, Clos ... ,, 191
chinensis, Clos ... ,, 191
crassipes, Clos ... ,, 191
crenata, *Clos* ... ,, 191
dasyanthera, Benn. ... ,, 191
Gærtneri, *Thw.* ... ,, 191
lanceolata, Clos ... ,, 191

Scolopia Vol. Page
Pseudo-crenata, Clos ... i. 191
pusilla, Moon ... ,, 191
rhinanthera, *Clos* ... ,, 190
Roxburghii, *Clos* ... ,, 190
sæva, Hance ... ,, 191
Scoparia, *Linn.* ... iv. 289
dulcis, *Linn.* ... ,, 289
Scopolia, *Jacq.* ... iv. 243
Boveana, Dunal ... ,, 245
Datora, Dunal ... ,, 245
lurida, *Dunal* ... ,, 243
mutica, Dunal ... ,, 245
præalta, Dunal ... ,, 244
Scopolia, Linn. f. ... v. 193
involucrata, C. A. Mey. ... ,, 193
Scopolia, Sm. ... i. 497
aculeata, Sm. ... ,, 497
Scorodosma fœtidum, Bunge ii. 708
Scortechinia, *Hk. f.* ... v. 366
Kingii, *Hk. f.* ... ,, 366
nicobarica, *Hk. f.* ... ,, 367
Scorzonera, *Linn.* ... iii. 418
bupleuroides, *D. Don* ... ,, 419
divaricata, *Turcz.* ... ,, 418
orientalis, Linn. ... ,, 413
purpurea, *Linn.* ... ,, 418
Roylei, DC. ... ,, 418
Stewartii, *Hk. f.* ... ,, 419
tingitana, Linn. ... ,, 413
virgata, DC. ... ,, 418
Scotanthus Porteanus, Naud. ii. 611
tubiflorus, Naud. ... ,, 611
Scrophularia, *Linn.* ... iv. 253
auriculata, Scop. ... ,, 254
bicolor, Sibth. & Sm. ... ,, 257
calycina, *Benth.* ... ,, 253
canina, Linn. ... ,, 256
decomposita, Royle ... ,, 256
decumbens, Fisch. & Mey. ,, 254
dentata, *Royle* ... ,, 256
depauperata, Boiss. ... ,, 256
Edgeworthii, *Benth.* ... ,, 255
elatior, *Benth.* ... ,, 255
glandulosa, Waldst. & Kit. ,, 254
Griffithii, Benth. ... ,, 256
himalensis, *Royle* ... ,, 255
Kotschyi, Hk. f. & T. ... ,, 256
lucida, *Linn.* ... ,, 256
obtusa, *Edgew.* ... ,, 254
pauciflora, *Benth.* ... ,, 253
polyantha, *Royle* ... ,, 255
scabiosesæfolia, *Benth.* ... ,, 256
Scopolii, *Hoppe* ... ,, 254
urticæfolia, *Benth.* ... ,, 254
variegata, *Bieb.* ... ,, 256
SCROPHULARINEÆ ... iv. 246
Scutellaria, *Linn.* ... iv. 667

Scutellaria Vol. Page
angulosa, *Benth.* ... iv. 669
barbata, D. Don ... ,, 670
cana, Wall. ... ,, 669
celtidifolia, A. Ham. ... ,, 669
Colebrookiana, Benth. ... ,, 668
discolor, *Coleb.* ... ,, 667
floribunda, Benth. ... ,, 668
galericulata, *Linn.* ... ,, 670
glandulosa, *Hk. f.* ... ,, 669
glutinosa, Benth. ... ,, 667
grossa, *Wall.* ... ,, 669
heteropoda, Miq. ... ,, 668
Heydei, *Hk. f.* ... ,, 667
incurva, *Wall.* ... ,, 668
indica, Bl. ... ,, 668
indica, Roxb. ... ,, 668
japonica, Burm. ... ,, 620
khasiana, *Clarke* ... ,, 669
linearis, *Benth.* ... ,, 669
minor, Huds. ... ,, 670
mussooriensis, Wawra ... ,, 669
nodulosa, A. Ham. ... ,, 668
oblonga, *Benth.* ... ,, 668
peregrina, *Roxb.* ... ,, 670
prostrata, *Jacquem.* ... ,, 667
pulchella, Bunge ... ,, 667
repens, *Ham.* ... ,, 669
rivularis, *Wall.* ... ,, 670
robusta, Benth. ... ,, 668
scandens, D. Don ... ,, 669
squamulosa, A. Ham. ... ,, 670
violacea, *Heyne* ... ,, 668
Wallichiana, A. Ham. ... ,, 669
Wightiana, Benth. ... ,, 668
Scutia, *Comm.* ... i. 640
Commersoni, Brongn. ... ,, 640
indica, *Brongn.* ... ,, 640
lucida, G. Don ... ,, 640
paniculata, G. Don ... ,, 617
Rheediana, Wight ... ,, 640
Scutinanthe brunnea, Thw. i. 531
Scyphellandra, Thw. ... i. 189
virgata, Thw. ... ,, 189
Scyphiphora, *Gærtn.* ... iii. 125
hydrophyllacea, *Gærtn.* ,, 125
Scyphopetalum, *Hiern* ... i. 675
ramiflorum, *Hiern* ... ,, 676
Scyphostachys, *Thw.* ... iii. 122
coffeoides, *Thw.* ... ,, 122
pedunculatus, *Thw.* ... ,, 122
Scytalia bengalensis, Roxb. ... i. 689
chinensis, Gærtn. ... ,, 688
Danura, Roxb. ... ,, 684
glabra, Ham. ... i. 565, 690
Litchi, Roxb. ... i. 688
Longan, Roxb. ... ,, 689
Ramboutan, Roxb. ... ,, 687

Scytalia Vol. Page
rimosa, Roxb. ... i. 690
rubra, Roxb. ... „ 684
trijuga, Roxb. ... „ 681
verticillata, Roxb. ... „ 684
Seaforthia costata, Mart. ... vi. 409
Dicksonii, Mart. ... „ 409
disticha, Mart. ... „ 408
gracilis, Mart. ... „ 407
Kuhlii, Mart. ... „ 409
malaiana, Mart. ... „ 410
oryzæformis, Mart. ... „ 409
patula, Mart. ... „ 411
Sebæa, *R. Br.* ... iv. 99
aurea, R. Br. ... „ 99
carinata, Spreng. ... „ 98
khasiana, *Clarke* ... „ 99
Sebastiana, *Spreng.* ... v. 475
Chamælea, *Muell.* ... „ 475
Sebestena officinalis, Gærtn. iv. 136
Sebifera glutinosa, Lour. ... v. 158
Secamone, *Br.* ... iv. 12
canescens, Sm. ... „ 63
emetica, *Br.* ... „ 13
Finlaysoni, Wight ... „ 13
villosa, Bl. ... „ 13
SECAMONEÆ ... iv. 2, 12
Securidaca, *Linn.* ... i. 207
bracteata, *A. W. Benn.* ... „ 208
inappendiculata, Hassk. ... „ 208
paniculata, Wall. ... „ 208
scandens, Ham. ... „ 208
tavoyana, *Wall.* ... „ 208
Securinega hysterantha, Boj. v. 305
Leucopyrus, Brand. ... „ 328
Leucopyrus, Muell. ... „ 329
obovata, Muell. ... „ 328
ramiflora, Muell. ... „ 329
virosa, Baill. ... „ 329
Seddera evolvuloides, Wight iv. 224
latifolia, Hochst. ... „ 224
Sedgwickia cerasifolia, Griff. ii. 429
Sedum, *Linn.* ... ii. 417
adenotrichum, *Wall.* ... „ 420
asiaticum, *DC.* ... „ 419
atropurpureum, Turcz. ... „ 418
azureum, Royle ... „ 421
bupleuroides, *Wall.* ... „ 418
coccineum, Royle ... „ 418
coriaceum, *Wall.* ... „ 419
crassipes, Wall. ... „ 419
crenulatum, *Hk. f. & T.* ... „ 417
elongatum, *Wall.* ... „ 419
Ewersii, *Ledeb.* ... „ 421
fastigiatum, *Hk. f. & T.* ... „ 419
Gerardianum, Wall. ... „ 421
Griffithii, *Clarke* ... „ 421
heterodontum, *Hk. f. & T.* „ 417
Sedum Vol. Page
himalayanum, Wall. ... ii. 418
himalense, *D. Don* ... „ 418
humile, *Hk. f. & T.* ... „ 419
hypericifolium, Wall. ... „ 418
imbricatum, Hk. f. & T. ... „ 417
Jaeschkei, *Kurz* ... „ 421
japonicum, Sieb. ... „ 422
linearifolium, *Royle* ... „ 420
Moorcroftianum, Wall. ... „ 422
mucronatum, Edgew. ... „ 420
multicaule, *Wall.* ... „ 422
pallidum, *Bieb.* ... „ 421
paniculatum, Wall. ... „ 413
pauciflorum, Edgew. ... „ 420
perpusillum, *Hk. f. & T.* ... „ 422
pyriforme, Royle ... „ 420
quadrifidum, *Pall.* ... „ 418
Rhodiola, *DC.* ... „ 417
rosulatum, *Edgew.* ... „ 420
rubrum, Royle ... „ 421
serratum, Jacquem. ... „ 417
sinuatum, Royle ... „ 420
spinosum, Thunb. ... „ 416
Stracheyi, Hk. f. & T. ... „ 418
tibeticum, *Hk. f. & T.* ... „ 418
trifidum, *Wall.* ... „ 420
trullipetalum, *Hk. f. & T.* „ 421
Urvillei, DC. ... „ 422
Wallichianum, Hk. f. & T. „ 419
Seetzenia, *Br.* ... i. 424
orientalis, *Dcne.* ... „ 424
Sehima, Forsk. ... vii. 136
ischæmoides, Forsk. ... „ 136
Kotschyi, Hochst. ... „ 136
macrostachyum, Hochst. ... „ 136
Seidlia, Opiz ... vi. 661
Seidlia, Kostel. ... i. 302
lanceæfolia, Kostel. ... „ 302
SELAGINEÆ ... iv. 558
Selago pusilla, Thunb. ... iv. 281
Selas lanceolatum, Spreng. i. 498
Selenipedium Parishii, Jolibois ... vi. 174
Selinum, *Linn.* ... ii. 699
Candollii, *DC.* ... „ 700
Candollii, Edgew. ... „ 700
? dissectum, *Wall.* ... „ 701
glaucum, Wall. ... „ 710
papyraceum, *Clarke* ... „ 701
stellatum, D. Don ... „ 705
striatum, *Benth.* ... „ 699
tenuifolium, *Wall.* ... „ 700
vaginatum, *Clarke* ... „ 700
Sellowia uliginosa, Roth ... ii. 569
Semecarpus, *Linn. f.* ... ii. 30
acuminata, *Thw.* ... „ 33
? *acuminata*, Kurz ... „ 35

Semecarpus Vol. Page
albescens, *Kurz* ... ii. 35
Anacardium, *Linn. f.* ... „ 30
auriculata, *Bedd.* ... „ 32
coriacea, *Thw.* ... „ 32
cuneifolia, Roxb. ... „ 31
Gardneri, *Thw.* ... „ 33
Grahamii, Wight ... „ 37
grandifolia, Wall. ... „ 41
heterophylla, *Bl.* ... „ 35
lævigata, *Thw.* ... „ 35
latifolia, Pers. ... „ 31
? lurida, *Hk. f.* ... „ 34
marginata, *Thw.* ... „ 32
microcarpa, *Wall.* ... „ 31
Moonii, *Thw.* ... „ 32
nigro-viridis, *Thw.* ... „ 34
oblongifolia, Thw. ... ii. 33, 34
obovata, *Moon* ... ii. 32
obscura, *Thw.* ... „ 33
obscura, Thw. ... „ 33
parvifolia, *Thw.* ... „ 34
pubescens, *Thw.* ... „ 31
subpanduriformis, *Wall.* „ 35
subpeltata, *Thw.* ... „ 33
subracemosa, *Kurz* ... „ 35
Thwaitesii, *Hk. f.* ... „ 31
travancorica, *Bedd.* ... „ 31
Walkeri, *Hk. f.* ... „ 33
? *zeylanica*, Bl. ... „ 33
Semeiocardium glaucescens, Hassk. ... i. 201
Hamiltonii, Hassk. ... „ 201
hyalinum, Hassk. ... „ 201
Sempervivum, *Linn.* ... ii. 422
acuminatum, *Dcne.* ... „ 422
album, Edgew. ... „ 423
fimbriatum, Klotz. ... „ 423
himalayense, Klotz. ... „ 422
mucronatum, *Edgew.* ... „ 423
sedoides, *Dcne.* ... „ 423
Senacia nepalensis, DC. ... i. 199
Senecillis Jacquemontiana, Dcne. ... iii. 350
Senecio, *Linn.* ... iii. 338
acuminatus, *Wall.* ... „ 354
alatus, *Wall.* ... „ 353
alpinus, Clarke ... „ 339
amplexicaulis, *Wall.* ... „ 348
analogus, DC. ... „ 339
Andersoni, Clarke ... „ 356
angulosus, DC. ... „ 355
angulosus, Wall. ... „ 355
arachnoideus, Wall. ... „ 351
araneosus, *DC.* ... „ 351
arnicoides, *Wall.* ... „ 351
Arnottianus, DC. ... „ 341
Atkinsoni, Clarke ... „ 350

Senecio Vol. Page
aureus, Wall. ... iii. 355
Bhot, *Clarke* ... „ 355
belgaumensis, *Clarke* ... „ 348
bracteolatus, *Hk. f.* ... „ 339
Buimalia, *Ham.* ... „ 352
calthæfolius, *Hk. f.* ... „ 350
campylodes, DC. ... „ 352
candicans, *DC.* ... „ 352
Candolleanus, *Wall.* ... „ 353
chenopodifolius, *DC.* ... „ 354
chinensis, DC. ... „ 352
chrysanthemifolius, DC. ... „ 342
chrysanthemoides, *DC.* ... „ 339
chrysanthemoides, DC. ... „ 339
cordatus, Wall. ... „ 352
coronopifolius, *Desf.* ... „ 341
corymbosus, *Wall.* ... „ 351
corymbosus, Clarke ... „ 349
Dalzellii, *Clarke* ... „ 349
densiflorus, *Wall.* ... „ 355
densiflorus, DC. ... „ 355
dentatus, Wall. ... „ 353
denudatus, D. Don ... „ 340
diversifolius, *Wall.* ... „ 340
dubius, *Ledeb.* ... „ 342
dubius, Hk. f. & T. ... „ 342
Edgeworthii, *Hk. f.* ... „ 346
flexicaulis, Edgew. ... „ 352
flexuosus, Wall. ... „ 352
Gardneri, *Thw.* ... „ 343
Gibsoni, *Hk. f.* ... „ 347
graciliflorus, *DC.* ... „ 338
gracilis, Arn. ... „ 341
Grahami, *Hk. f.* ... „ 347
Griffithii, *Hk. f. & T.* ... „ 341
hastatus, Linn. ... „ 353
hewrensis, *Hk. f.* ... „ 346
Hindsii, Benth. ... „ 352
Hohenackeri, *Hk. f.* ... „ 345
intermedius, Wight ... „ 352
Jacobæa, D. Don ... „ 339
Jacquemontianus, *Benth* „ 350
Kunthianus, *Wall.* ... „ 354
Kurzii, *Clarke* ... „ 341
laciniosus, Arn. ... „ 346
laciniatus, Wall. ... „ 339
lætus, Edgew. ... „ 339
lavandulæfolius, *DC.* ... „ 343
Lawii, *Clarke* ... „ 347
Lessingianus, *Clarke* ... „ 344
Levingii, *Clarke* ... „ 353
Ligularia, *Hk. f.* ... „ 349
linifolius, *Clarke* ... „ 343
ludens, *Clarke* ... „ 345
macranthus, *Clarke* ... „ 349
Mishmi, *Clarke* ... „ 344
Mortoni, *Clarke* ... „ 349

Senecio Vol. Page
multifidus, Willd. ... ... iii. 346
nilagerensis, Schultz ... „ 337
nilgheryanus, *DC.* ... ... „ 341
niveus, Wall. ... ... „ 390
nudicaulis, *Ham.* ... ... „ 340
obtusatus, *Wall.* ... ... „ 340
pachycarpus, *Clarke* ... „ 349
pallens, Wall. ... ... „ 340
pedunculatus, *Edgew.* ... „ 342
pedunculatus, Hk. f. & T. „ 342
? *peguanus*, DC. ... ... „ 356
pilosiusculus, Clarke ... „ 344
pinnatifidus, Clarke ... .. „ 345
polycephalus, *Clarke* ... „ 344
quinquelobus, *Hk. f. & T.* „ 353
Rabani, Clarke ... ... „ 344
racemosus, Wall. ... ... „ 350
ramosus, *Wall.* ... ... „ 342
raphanifolius, Wall. ... „ 340
reniformis, Wall. ... ... „ 331
reticulatus, Clarke .. ... „ 347
retusus, *Wall.* ... ... „ 350
Royleanus, DC. ... ... „ 338
rufinervis, *DC.* ... ... „ 355
saxatilis, *Wall.* ... ... „ 344
scandens, *D. Don* ... ... „ 352
scandens, Wall. ... ... „ 352
sibiricus, Ledeb. ... ... „ 350
Simonsii, *Clarke* ... ... „ 356
sisymbriiformis, DC. ... „ 339
spectabilis, Wall. ... ... „ 339
stipulatus, DC. ... ... „ 352
stipulatus, Wall. ... ... „ 339
subdentatus, Ledeb. ... „ 342
tanacetoides, Kth. & Bouché „ 338
tenuifolius, *Burm.* ... ... „ 345
tetrandus, *Ham.* ... ... „ 342
tetranthus, *DC.* ... ... „ 352
Thomsoni, *Clarke* ... ... „ 348
tibeticus, *Hk. f.* ... ... „ 340
tomentosus, Clarke ... ... „ 346
triligulatus, *Ham.* ... ... „ 356
truncatus, Wall. ... ... „ 340
uncinellus, DC. ... ... „ 355
vagans, *Wall.* ... ... „ 355
violaceus, Wall. ... ... „ 340
vulgaris, Linn. ... . „ 342
Walkeri, Arn. ... ... „ 351
Walkeri, Thw. ... ... „ 337
Wallichii, *DC.* ... ... „ 353
Wightianus, DC. ... ... „ 352
Wightii, Benth. ... ... „ 344
Yakla, Clarke ... ... „ 348
zeylanicus, *DC.* ... ... „ 340
SENECIONIDEÆ ... ... iii. 224, 330
Senna Absus, Roxb. ... ... ii. 265
alata, Roxb. ... ... „ 264

Senna Vol. Page
arborescens, Roxb. ... ... ii. 265
auriculata, Roxb. ... ... „ 263
bicapsularis, Roxb. ... ... „ 263
dimidiata, Buch. ... ... „ 266
esculenta, Roxb. ... ... „ 262
exigua, Roxb. ... ... „ 265
obtusa, Roxb. ... ... „ 261
occidentalis, Roxb. ... ... „ 262
officinalis, Roxb. ... ... „ 264
prostrata, Roxb. ... ... „ 266
purpurea, Roxb. ... ... „ 263
sensitiva, Roxb. ... ... „ 266
Sophora, Roxb. ... ... „ 262
speciosa, Roxb. ... ... „ 265
sumatrana, Roxb. ... ... „ 261
tenella, Roxb. ... ... „ 266
Tora, Roxb. ... ... „ 263
toroides, Roxb. ... ... „ 263
Senra, *Cav.* ... ... i. 333
incana, *Cav.* ... ... „ 334
Sephalica, Jones . ... iii. 603
Septas hypericifolia, Wall.,
vide *Daphne* ... ... v. 196
repens, Lour. ... ... iv. 272
Serapias Epidendræa, Kœn. vi. 198
epidendrea, Retz. ... ... „ 1
Serianthes, *Benth.* ... ... ii. 301
grandiflora, *Benth.* ... ... „ 301
Sericostoma, *Stocks* ... ... iv. 175
pauciflorum, *Stocks* ... „ 175
Sericura japonica, Steud. ... vii 304
Serissa ceylanica, Thw. ... iii. 193
corymbosa, Bedd. ... ... „ 194
fragrans, Bedd. ... ... „ 193
Gardneri, Thw. ... ... „ 192
scabrida, Thw. ... ... „ 193
ternata, Kurz ... ... „ 193
Wightii, Bedd. . ... „ 193
Serpicula, *Linn.* ... ... ii. 431
brevipes, W. & A. ... ii. 431, 432
hirsuta, W. & A. ... ... ii. 431
hirsuta, Wight ... ... „ 431
indica, *Thw.* ... ... „ 431
indica, Thw. ... ... „ 431
veronicæfolia, Bory ... ... „ 432
verticillata, *Roxb.* ... ... „ 432
zeylanica, *Arn.* ... ... „ 431
sp., Wall. ... ... „ 431
Serpicula, Linn. f. ... ... v. 659
verticillata, Linn. f. ... ... „ 659
Serræa incana, Dcne. ... ... i. 334
rupestris, Edgew. ... ... „ 334
Serrafalcus, Parl. ... ... vii. 360
Cavanillesii, Willk. & Lange „ 360
mollis, Parl. ... ... „ 360
patulus, Parl. ... ... „ 361
scoparius, Parl. ... ... „ 360

Serrafalcus Vol. Page
Thomini, Hard. ... vii. 360
Serratula, *Linn.* ... iii. 379
albescens, Wall. ... ,, 374
anthelmintica, Roxb. ... ,, 236
carthamoides, Roxb. ... ,, 373
cinerea, Roxb. ... ,, 234
divaricata, Fisch. & Mey. ... ,, 383
indica, Wall. ... ,, 377
? *indica*, Willd. ... ,, 381
macrocephala, Wall. ... ,, 378
multicaulis, Wall. ... ,, 373
pallida, *DC.* ... ,, 379
polygyna, A. Rich. ... ,, 271
Sesamum, *Linn.* ... iv. 386
indicum, *DC.* ... ,, 387
laciniatum, *Klein* ... ,, 387
luteum, Retz. ... ,, 387
occidentale, Heer & Regel ,, 287
orientale, Linn. ... ,, 387
prostratum, *Retz.* ... ,, 387
Sesbania, *Pers.* ... ii. 114
aculeata, *Pers.* ... ,, 114
ægyptiaca, *Pers.* ... ,, 114
affinis, Schrad. ... ,, 115
cannabina, Pers. ... ,, 115
grandiflora, *Pers.* ... ,, 115
picta, Pers. ... ,, 114
procumbens, *W. & A.* ... ,, 115
sericea, DC. ... ,, 115
Seseli, *Linn.* ... ii. 693
ammoides, Jacq. ... ,, 682
benghalensis, Roxb. ... ,, 696
daucifolium, *Clarke* ... ,, 693
indicum, *W. & A.* ... ,, 693
sibiricum, *Benth.* ... ,, 693
trilobum, *Benth.* ... ,, 694
zeylanicum, Rottl. ... ,, 684
SESELINEÆ ... i. 666
Sesleria dura, Kunth ... vii. 335
lagopodioides, Spreng. ... ,, 334
spicata, Spreng. ... ,, 306
Sestochilos uniflorum, Breda v. 755
Sesuvium, *Linn.* ... ii. 659
Portulacastrum, *Linn.* ... ,, 659
repens, Willd. ... ,, 659
Setaria, Beauv. ... vii. 77
affinis, Schult. ... ,, 80
ambigua, Guss. ... ,, 80
asiatica, Hort. ... ,, 78
aspera, Miq. ... ,, 82
aurea, Hochst. ... ,, 79
auricoma, Link ... ,, 79
canescens, Kunth ... ,, 81
cenchroides, R. & S. ... ,, 87
chlorantha, Schur ... ,, 80
chrysantha, Heynh. ... ,, 79
compacta, Schur ... ,, 78

Setaria Vol. Page
compressa, Kunth ... vii. 85
dasyura, Hort. ... ,, 79
decipiens, C. Schimp. ... ,, 80
erythrosperma, Hornem. ,, 78
Fieldingii, C. Muell. ... ,, 81
flava, Kunth ... ,, 79
flavida, Hornem. ... ,, 78
floribunda, Spreng. ... ,, 80
Forbesiana, *Hk. f.* ... ,, 81
germanica, Beauv. ... ,, 78
glauca, *Beauv.* ... ,, 78
glauca, Hochst. ... ,, 80
globularis, Presl ... ,, 78
gracillima, *Hk. f.* ... ,, 81
helvola, R. & S. ... ,, 79
? *hirsuta*, Kunth ... ,, 35
hirta, Kunth ... ,, 81
hirtella, Schult. ... ,, 66
humifusa, Dum. ... ,, 79
? *imberbis*, R. & S. ... vii. 79, 80
intermedia, *R. & S.* ... vii. 79
italica, *Beauv.* ... ,, 78
longiflora, Desv. ... ,, 62
luxurians, Willd. ... ,, 82
macrochæta, Schult. ... ,, 78
macrostachya, Duthie ... ,, 81
macrostachya, H. B. K. ... ,, 81
maritima, R. & S. ... ,, 78
mauritiana, Spreng. ... ,, 56
melinis, Link ... ,, 78
nana, Dum. ... ,, 80
nubica, Link ... ,, 80
panis, Jessen ... ,, 78
penicillata, Nees ... ,, 79
penicillata, Wall. ... ,, 80
persica, Hornem. ... ,, 78
pilifera, Spreng. ... ,, 35
pumila, Schult. ... ,, 79
respiciens, Hochst. ... ,, 80
Rottleri, Spreng. ... ,, 80
rubicunda, Dum. ... ,, 79
? *sciuroidea*, C. Muell. ... ,, 79
? *stricta*, Kunth ... ,, 59
tejucensis, Kunth ... ,, 79
? *tomentosa*, Kunth ... ,, 80
Ventenatii, Kunth ... ,, 79
verticillata, *Beauv.* ... ,, 80
verticillata, Wall. ... ,, 79
verticilliformis, Dum. ... ,, 80
villosa, Beauv. ... ,, 80
violacea, Hornem ... ,, 78
viridis, *Beauv.* ... ,, 80
Weinmanni, R. & S. ... ,, 80
sp., Wall. ... ,, 78
Sethia acuminata, Arn. ... i. 415
erythroxyloides, Wight ... ,, 415
indica, DC. ... ,, 414

	Vol	Page
Sethia		
Kunthiana, Wall.	i.	414
lanceolata, Thw.	,,	415
lanceolata, Wight	,,	415
Shorea, *Roxb.*	i.	303
acuminata, *Dyer*	,,	305
assamica, *Dyer*	,,	307
bracteolata, *Dyer*	,,	305
floribunda, *Kurz*	,,	304
gratissima, *Dyer*	,,	307
laccifera, Heyne	,,	305
leprosula, *Miq.*	,,	305
leucobotrya, Miq.	,,	306
lissophylla, *Thw.*	,,	307
longisperma, Roxb.	,,	308
macroptera, *Dyer*	,,	308
oblongifolia, *Thw.*	,,	307
obtusa, *Wall.*	,,	306
parvifolia, *Dyer*	,,	305
penicillata, A. DC	,,	306
reticulata, *Thw.*	,,	307
robusta, *Gærtn.*	,,	306
robusta, A. DC.	,,	304
robusta, Roth	,,	304
Roxburghii, G. Don	,,	305
sericea, *Dyer*	,,	306
siamensis, *Miq.*	,,	304
stellata, *Dyer*	,,	304
stipularis, *Thw.*	,,	307
? *suava*, Wall.	,,	304
Talura, *Roxb.*	,,	304
Tumbuggaia, *Roxb.*	,,	306
Shuteria, *W. & A.*	ii.	181
densiflora, Benth.	,,	182
? ferruginea, *Baker*	,,	182
glabrata, W. & A.	,,	182
hirsuta, *Baker*	,,	182
involucrata, W. & A.	,,	182
suffulta, *Benth.*	,,	182
trisperma. Miq.	,,	181
vestita, *W. & A.*	,,	181
Shuteria, Chois.	iv.	217
bicolor, Chois.	,,	217
Sibbaldia cuneata, Edgew.	ii.	346
cuneata, Kunze	,,	346
parviflora, Willd.	,,	346
potentilloides, Camb.	,,	347
procumbens, Hk. f. & T.	,,	346
procumbens, Linn.	,,	346
purpurea, Royle	,,	347
tetrandra, Bunge	,,	346
Sibthorpia, *Linn.*	iv.	288
pinnata, *Benth.*	,,	288
Sicyos oxyanthus, Wall.	ii.	633
pentandrus, Wall.	i.	595
Sida, *Linn.*	i.	322
Abutilon, Linn.	,,	327
acuta, Burm.	,,	323

	Vol.	Page
Sida		
alba, Linn.	i.	323
alnifolia, Linn.	,,	323
althæifolia, Sw.	,,	324
? *amœna*, Wall.	,,	328
asiatica, Linn.	,,	326
asiatica, Wall.	,,	327
aurita, Wall.	,,	328
Beloere, L'Her.	,,	326
Boriara, Wall.	,,	323
canariensis, Willd.	,,	323
carpinifolia, *Linn.*	,,	323
chinensis, Retz	,,	324
compressa, DC.	,,	323
compressa, Wall.	,,	323
cordifolia, *Linn.*	,,	324
corylifolia, *Wall.*	,,	324
corynocarpa, Wall.	,,	324
crispa, Linn.	,,	328
cuneifolia, Roxb.	i.	322, 374
diversifolia, Spreng.	i.	336
Eteromischos, Cav.	,,	326
glandulosa, Roxb.	,,	323
glauca, Cav.	,,	327
glutinosa, Roxb.	,,	322
graveolens, Roxb.	,,	327
grewioides, *Guill. & Perr.*	,,	323
herbacea, Cav.	,,	324
heterophylla, Spreng.	,,	336
hirta, Wall.	i.	322, 327
hirta, Lamk.	i.	327
humilis, *Willd.*	,,	322
indica, Linn.	,,	326
indica, Cav.	,,	328
lanceolata, Roxb.	,,	323
Leschenaultiana, DC.	,,	325
macrophylla, Wall.	,,	326
micans, Cav.	,,	324
microphylla, Cav.	,,	324
montana, Roxb.	,,	328
morifolia, Cav.	,,	322
multicaulis, Cav.	,,	322
mutica, Delile	,,	327
mysorensis, *W. & A.*	,,	322
nervosa, Wall.	,,	322
obovata, Wall.	,,	324
olens, Ham.	,,	322
orientalis, Cav.	,,	324
oxyphylla, Wall.	,,	326
pentacarpos, Roxb.	,,	324
periplocifolia, Linn.	,,	325
persica, Burm.	,,	326
philippica, DC.	,,	324
pilosa, Retz	,,	322
pilosa, L'Her.	,,	327
polyandra, Roxb.	,,	326
populifolia, Lamk.	,,	326
? *radicans*, Cav.	,,	322

Sida Vol. Page
radicans, Wall. ... ... i. 322
ramosa, Cav. ... ... ,, 328
retusa, Linn. ... ... ,, 324
retusa, Wight .. .. ,, 323
rhombifolia, *Linn.* ... ... ,, 323
rhombifolia, Wall. ... ... ,, 324
rhomboidea, Roxb. ... ... ,, 324
rotundifolia, Cav. ... ... ,, 324
scabrida, W. & A. ... ... ,, 324
Schimperiana, *Hochst.* ... ,, 322
scoparia, Lour. ... ... ,, 323
spinosa, *Linn.* ... ... ,, 323
Stauntoniana, DC. ... ... ,, 323
stipulata, Cav. ... ... ,, 323
tenax, Ham. ... ... ,, 322
tomentosa, Roxb. ... ... ,, 327
unilocularis, L'Her.... ... ,, 322
urticæfolia, W. & A. ... ,, 322
veronicæfolia, Lamk. ... ,, 322
villosa, Wall. ... ... ,, 327
Sideroxylon, *Linn.* ... ... iii. 536
arboreum, Ham. ... ... ,, 536
armatum, Roth ... ... ,, 538
assamicum, *Clarke* ... ... ,, 537
attenuatum, A. DC.... ... ,, 537
ferrugineum, *Hk. & Arn.* ,, 537
? Gamblei, *Clarke* ... ... ,, 538
grandifolium, *Wall.* ... ,, 536
Hookeri, *Clarke* ... ... ,, 537
Maingayi, *Clarke* ... ... ,, 536
malaccense, *Clarke* ... ... ,, 537
regium, Wall. ... iii. 536, 542
? *rugosum*, Wall. ... ... v. 180
spinosum, Willd. ... ... i. 194
tomentosum, *Roxb.* ... ... iii. 538
tomentosum, Wall. ... iii. 537, 539
Wallichianum, G. Don ... v. 180
Wightianum, Wall. ... iii. 539
sp., Hk. f. & T.... ... ,, 536
Siegesbeckia, *Linn.* ... ... iii. 303
brachiata, Roxb. ... ... ,, 304
glutinosa, Wall. ... ... ,, 304
orientalis, *Linn.* ... ... ,, 304
? *orientalis*, Roxb. ... ... ,, 304
Sieversia elata, Royle ... ... ii. 343
Silene, *Linn.* ... ... i. 217
amæna, Linn. ... ... ,, 219
apetala, *Willd.* ... ... ,, 218
arenosa, *C. Koch* ... ... ,, 219
Armeria, Linn. ... ... ,, 218
colorata, Poir. ... ... i. 218, 226
conoidea, *Linn.* ... ... i. 218
Cucubalus, Wib. ... ... ,, 218
dasyphylla, Turcz. ... ... ,, 219
Falconeriana, *Benth.* ... ,, 220
gallica, *Linn.* ... ... ,, 218
graminifolia, Otth ... ... ,, 219

Silene Vol. Page
Griffithii, *Boiss.* ... ... i. 220
Gul-Waldemarii, Klotz. ... ,, 219
indica, Roxb. ... ... ,, 225
inflata, *Sm.* ... ... ,, 218
intrusa, W. & A. ... ... ,, 218
khasiana, *Rohrb.* ... ... ,, 221
kunawarensis, *Benth.* ... ,, 220
leyseroides, Boiss. ... ... ,, 219
Moorcroftiana, *Wall.* ... ,, 219
multifida, Edgew. ... ... ,, 220
noctiflora, Linn. ... ... ,, 218
repens, Boiss. ... ... ,, 219
salsa, Boiss. ... ... ,, 219
? Stracheyi, *Edgew.* ... ,, 221
suaveolens, Kar. & Kir. ... ,, 220
tenuis, *Willd.* ... . ,, 219
viridiflora, Rohrb. ... ... ,, 221
viscosa, Linn. ... ... ,, 220
viscosa, Pers. ... ... ,, 220
Wallichiana, Klotz.... ... ,, 218
Webbiana, *Wall.* ... ... ,, 220
Webbiana, Wall. ... ... ,, 220
SILENEÆ ... ... i. 212
Silvæa (lapsu *Sylvæa*)
Hookeriana, Baill. ... v. 397
semperflorens, Hk. & Arn. ,, 397
Silvianthus, *Hk. f.* ... ... iii. 86
bracteatus, *Hk. f.* ... ... ,, 86
Silybum, *Gaertn.* ... ... iii. 364
Marianum, *Gaertn.* ... ... ,, 364
Simaba quassioides, Ham. ... i. 520
SIMARUBEÆ ... ... i. 517
Sinapis alba, Linn. ... ... i. 157
brassicata, Linn. ... ... ,, 156
cuneifolia, Roxb. ... ... ,, 157
dichotoma, Roxb. ... ... ,, 156
divaricata, Roxb. ... ... , 134
erysimoides, Roxb. ... ... ,, 156
glauca, Roxb. ... ... ,, 156
integrifolia, Willd. ... ... ,, 157
juncea, Linn. ... ... ,, 157
nigra, Linn. ... ... ,, 156
patens, Roxb. ... ... ,, 157
pusilla, Roxb. ... ... ,, 134
ramosa, Roxb. .. .. ,, 157
rugosa, Roxb. ... ... ,, 157
trilocularis, Roxb. ... ... ,, 156
Sindora, Miquel ... ... ii. 268
siamensis, Teysm. ... ... ,, 268
velutina, *Baker* ... ... ,, 269
Wallichii, *Benth.* ... ... ,, 268
Siphisia saccata, Klotz. ... v. 77
Siphonanthus angustifolia, Willd. ... ... iv. 595
hastata, Roxb. ... ... ,, 596
indica, Willd. ... ... ,, 595
Siphonodon, *Griff.* ... ... i. 629

Siphonodon Vol. Page
celastrineus, *Griff.* ... ... i. 629
Sirium myrtifolium, Roxb. ... v. 231
Sison Ammi, Jacq. ... ... ii. 682
? *coniifolium*, Wall. ... ... „ 671
diversifolium, Wall. ... ... „ 681
? *tener*, Wall. ... ... „ 686
trinerve, Ham. ... ... „ 720
SISYMBRIEÆ ... ... i. 129
Sisymbrium, *Linn.* ... ... i. 147
Alliaria, *Scop.* ... ... „ 151
axillare, *Hk. f. & T.* ... ... „ 149
Columnæ, *Jacq.* ... ... „ 150
contortuplicatum, DC. ... „ 146
deltoideum, *Hk. f. & T.* ... „ 151
foliosum, *Hk. f. & T.* ... „ 148
himalaicum, *Hk. f. & T.* ... „ 147
humile, *C. A. Mey.* ... ... „ 148
Irio, *Linn.* ... ... „ 150
erioides, Boiss. ... ... „ 150
lasiocarpum, *Hk. f. & T.* ... „ 148
Loeselii, *Linn.* ... ... „ 151
minutiflorum, *Hk. f. & T.* ... „ 149
mollissimum, *C. A. Mey.* ... „ 147
nudum, Boiss. ... ... „ 137
pannonicum, *Jacq.* ... ... „ 150
planisiliquum, Hk. f. & T. „ 152
primulæfolium, Thoms. ... „ 152
rupestre, *Edgew.* ... ... „ 148
septulatum, DC. ... ... „ 150
Sophia, *Linn.* ... ... „ 150
strictum, *Hk. f. & T.* ... „ 149
Thalianum, *Gay & Monn.* „ 148
torulosum, Desf. ... ... „ 146
Wallichii, *Hk. f. & T.* ... „ 149
SISYRINCHIEÆ ... ... vi. 271
Sitodium cauliflorum, Gaertn. v. 541
Sium, *Linn.* ... ... ii. 683
latijugum, *Clarke* ... ... „ 683
nipponicum, Maxim. ... „ 684
triternatum, Moon ... ... „ 684
Skimmia, *Thunb.* ... ... i. 499
japonica, Thunb. ... ... „ 499
Laureola, *Hk. f.* ... ... „ 499
Skinneria cæspitosa, Chois. iv. 205
Slackia geonomæformis, Griff. vi. 415
insignis, Griff. ... ... i. 107
Sladenia, *Kurz* ... ... i. 281
celastrifolia, *Kurz* ... ... „ 281
Slevogtia maritima, Dalz. ... iv. 101
occidentalis, Griseb. ... „ 101
orientalis, Griseb. ... ... „ 101
verticillata, D. Don ... „ 101
Sloetia, *Teysm. & Binn.* ... v. 493
penangiana, *Oliv.* ... ... „ 493
Sideroxylon. *Teysm. & Binn.* „ 493
Wallichii, *King* ... ... „ 493
Smelowskia, C. A. Mey. ... i. 159
Smelowskia Vol. Page
integrifolia, C. A. Mey. ... i. 152
SMILACEÆ ... ... vi. 300
Smilacina, *Desf.* ... ... vi. 323
albiflora, Wall. ... ... „ 323
alpina, Royle ... ... „ 361
bootanensis, Griff. ... ... „ 323
divaricata, Wall. ... ... „ 323
fusca, *Wall.* ... ... „ 323
oleracea, *Hk. f. & T.* ... „ 323
oligophylla, *Hk. f.* ... ... „ 323
pallida, *Royle* ... ... „ 323
purpurea, Wall. ... ... „ 323
Smilax, *Linn.* ... ... vi. 302
aspera, *Linn.* ... ... „ 306
aspericaulis, *Wall.* ... ... „ 306
barbata, *Wall.* ... ... „ 306
Blumei, *A. DC.* .. .. „ 313
calophylla, *Wall.* ... ... „ 303
calophylla, Wall. ... ... „ 313
China, Maxim. ... ... „ 307
collina, Kunth ... ... „ 313
decipiens, Spreng. ... ... „ 313
elegans, *Wall.* ... ... „ 305
elegans, A. DC. ... ... „ 304
extensa, *Wall.* ... ... „ 309
extensa, Wall. ... ... „ 303
ferox, *Wall.* ... ... „ 307
fulgens, Wall. ... ... „ 306
glabra, *Roxb.* ... ... „ 302
glaucophylla, Klotz. ... ... „ 304
grandifolia, Voigt ... ... „ 310
grandis, Wall. ... ... „ 310
Griffithii, *A. DC.* ... ... „ 313
Helferi, *A. DC.* ... ... „ 309
Hohenackeri, Kunth ... „ 310
Hookeri, Kunth ... ... „ 302
indica, Vitm. ... ... „ 310
Kingii, *Hk. f.* ... ... „ 307
lævis, *Wall.* ... ... „ 308
lanceæfolia, *Roxb.* ... ... „ 308
laurifolia, Hohen. ... ... „ 310
laurifolia, Roxb. ... vi 311, 312
laurina, Kunth ... ... vi. 312
leucophylla, *Bl.* ... ... „ 312
longebracteolata, *Hk. f.* ... „ 305
? *luzonensis*, Presl ... ... „ 309
macrophylla, *Roxb.* ... „ 310
? *macrophylla*, Dalz. & Gibs. „ 312
maculata, Roxb. ... ... „ 306
megacarpa, *A. DC.* ... ... „ 311
menispermoidea, A. DC. ... „ 305
micropoda, A. DC ... ... „ 308
minutiflora, *A. DC.* ... ... „ 305
myosotiflora, *A. DC.* vi. 303, 309
Myrtillus, *A. DC.* ... ... vi. 304
? *narcotica*, Ham. ... ... „ 289
nilagarensis, Steud. ... ... „ 306

Smilax ... Vol. Page
obliqua, Spreng. ... ... vi. 313
ocreata, A. DC. ... ... ,, 311
? *odoratissima*, Bl. ... ... ,, 306
orthoptera, A. DC. ... ... ,, 311
ovalifolia, A. DC. ... ... ,, 312
ovalifolia, Hk. f. & T. ... ,, 310
ovalifolia, Roxb. ... ... ,, 310
oxyphylla, *Wall.* ... ... ,, 308
oxyphylla, Kunth ... ... ,, 308
pallescens, *A. DC.* ... ... ,, 307
parvifolia, *Wall.* ... ,, 304
peguana, *A. DC.* ... ... ,, 303
perfoliata, Bl. ... ... ,, 313
polyacantha, *Wall.* ... ... ,, 311
prolifera, *Roxb.* ... ... ,, 312
prolifera, Hk. f. & T. ... ,, 310
prolifera, Wall. vi. 310, 311, 313
Pseudo-China, Hb. Madr. vi. 310
Pseudo-China, Roxb. ... ,, 313
quadrata, *A. DC.* ... ... ,, 308
retusa, Roxb. ... ... ,, 310
rigida, *Wall.* ... ... ,, 304
Roxburghiana, *Wall.* ... ,, 311
Roxburghiana, Wall. ... ,, 306
Roxburghii, Kunth ... ... ,, 310
setosa, Miq. ... ... ,, 306
singaporensis, A. DC. ... ,, 313
Thomsoniana, A. DC. ... ,, 307
umbellata, Hb. Madr. ... ,, 310
umbellata, Heyne ... ... ,, 312
vaginata, *Dcne.* ... ... ,, 305
Villandia, Ham. ... ... ,, 314
virosa, Ham. ... ... ,, 289
Wallichii, Kunth ... ... ,, 313
Wallichii, Steud. ... ... ,, 304
Wightii, *A. DC.* ... ... ,, 310
zeylanica, *Linn.* ... ... ,, 309
zeylanica, Wall. ... ... ,, 309
zeylanica, Wight ... ... ,, 310
Smithia, *Ait.* ... ... ii. 148
abyssinica, Hochst. ... ,, 149
aspera, Roxb. ... ... ,, 151
bigemina, *Dalz.* ... ... ,, 149
blanda, Hohen. ... ... ,, 150
blanda, *Wall.* ... ... ,, 151
capitata, *Dalz.* ... ... ,, 150
capitata, Desv. ... ... ,, 149
ciliata, *Royle* ... ... ,, 150
conferta, Sm. ... ... ,, 149
dichotoma, *Dalz.* ... ... ,, 150
geminiflora, *Roth* ... ... ,, 149
gracilis, *Benth.* ... ... ,, 150
grandis, *Benth.* ... ... ,, 151
hirsuta, Dalz. ... ... ,, 151
hispidissima, Zoll. ... ,, 149
laxiflora, Benth. ... ... ,, 149
paniculata, Arn. ... ... ,, 151
Smithia ... Vol. Page
pumila, Royle ... ... ii. 150
purpurea, Hook. ... ... ,, 149
pycnantha, *Benth.* ... ... ,, 150
racemosa, Heyne ... ... ,, 151
sensitiva, *Ait.* ... ... ,, 148
sensitiva, Wall. ... ... ,, 149
setulosa, *Dalz.* ... ... ,, 149
Smythea, *Seem.* ... ... i. 632
calpicarpa, *Kurz* ... ... ,, 632
Sodada decidua, Forsk. ... i. 175
Soja angustifolia, Miq. ... ii. 184
hispida, Moench ... ... ,, 184
javanica, Grah. ... ... ,, 183
Wightii, Grah. ... ... ,, 183
SOLANACEÆ ... ... iv. 228
Solandra, Murray ... ... i. 336
lobata, Murray ... ... ,, 336
Solandra, Sw. ... ... iv. 83
oppositifolia, Moon ... ... ,, 83
SOLANEÆ ... ... iv. 228
Solanum, *Linn.* ... ... iv. 229
acetosæfolium, Lamk. ... ,, 236
aculeatissimum, *Jacq.* ... ,, 237
agreste, Roth ... ... ,, 235
Anguivi, Bojer ... ... ,, 235
angulosum, Heyne ... ... ,, 231
argenteum, Heyne ... ... ,, 233
armatum, Br. ... ... ,, 236
barbisetum, *Nees* ... ... ,, 233
biflorum, *Lour.* ... ... ,, 232
biflorum, D. Don ... ... ,, 232
bigeminatum, Nees ... ,, 231
Blumei, Nees ... ... ,, 231
Calleryanum, Dunal ... ,, 232
calycinum, Nees ... ... ,, 230
canaranum, Miq. ... ... ,, 236
canescens, Bl. ... ... ,, 235
coagulans, *Forsk.* ... ... ,, 236
conanthum, Dunal ... ... ,, 230
cordatum, Forsk. ... ... ,, 237
crassipetalum, *Wall.* ... ,, 232
crassipetalum, Wight ... ,, 231
Cumingii, Dunal ... ... ,, 235
cuneatum, Moench ... ... ,, 235
cupulatum, Miq. ... ... ,, 231
decemdentatum, Roxb. ... ,, 232
decemfidum, Nees ... ... ,, 232
denticulatum, *Bl.* ... ... ,, 231
denticulatum, Nees ... ... ,, 231
diffusum, Roxb. ... ... ,, 236
dulcamara, *Linn.* ... ... ,, 229
erianthum, D. Don ... ... ,, 230
eriophorum, Dunal ... ... ,, 233
erosum, Van Heurck & Muell. ... ... ,, 235
erythræum, Dunal ... ... ,, 229
esculentum, Dunal ... ... ,, 235

Solanum Vol. Page
farinosum, Wall. iv. 233
ferox, *Linn.* ,, 233
ferrugineum, Jacq. ,, 234
fistulosum, Rich. ,, 229
flexuosum, Heyne ,, 231
giganteum, *Jacq.* ,, 233
Gouakai, Dunal ,, 232
gracilipes, *Dcne.* ,, 237
heteracanthum, Dunal ,, 235
Heynei, R. & S. ,, 235
himalense, Dunal ,, 235
hirsutum, Roxb. ,, 233
Hohenackeri, Van Heurck & Muell. ,, 234
Humboldtii, Willd. ,, 237
incanum, Linn. ,, 235
incertum, Dunal ,, 229
indicum, *Linn.* ,, 234
insanum, Linn. ,, 235
involucratum, Bl. ,, 233
involucratum, Kurz ,, 233
Jacquemonti, Dunal ,, 237
Jacquini, Miq. ,, 236
Jacquini, Willd. ,, 236
Junghuhnii, Miq. ,, 235
khasianum, *Clarke* ,, 234
læve, *Dunal* ,, 231
lasiocarpum, Bl. ,, 233
laxum, Royle ,, 229
longum, Roxb. ,, 235
Lycopersicum, Linn. ,, 237
lyratum, Thunb. ,, 229
macrodon, *Wall.* ,, 232
Melongena, *Linn.* ,, 235
Melongena, Wall. ,, 236
melanocarpum, Dunal ,, 235
membranaceum, Thw. ,, 231
membranaceum, Wall. ,, 231
membranaceum, Wight ,, 231
miniatum, Bernh. ,, 229
mollissimum, Bl. ,, 232
multiflorum, Roth ,, 235
Neesianum, Dalz. & Gibs. ,, 231
Neesianum, Wall. ,, 231
nigrum, *Linn.* ,, 229
niveum, Vahl ,, 233
nodiflorum, Jacq. ,, 229
Osbeckii, Dunal ,, 232
ovigerum, Bl. ,, 235
paludosum, Dunal ,, 229
persicum, Willd. ,, 229
pinnatifidum, Roth ,, 235
pressum, Dunal ,, 235
Pseudolycopersicum, Jacq. ,, 237
Pseudosaponaceum, Bl. ,, 234
Pseudo-undatum, Bl. ,, 235
pterocaulon, Dunal ,, 229

Solanum Vol. Page
pubescens, *Willd.* iv. 230
pubescens, Kurz ,, 231
pubescens, Roxb. ,, 230
Rhinocerotis, Bl. ,, 229
Roxburghii, Dunal ,, 229
rubrum, Miller ,, 229
Rumphii, Dunal ,, 229
sanctum, Linn. ,, 236
sarmentosum, *Nees* ,, 236
sativum, Dunal ,, 235
spirale, *Roxb.* ,, 230
stramonifolium, Dunal ,, 233
stramonifolium, Roxb. ,, 234
subtruncatum, *Wall.* ,, 231
suffruticosum, Dunal ,, 229
torvum, *Sw.* ,, 234
triangulare, Lamk. ,, 229
trilobatum, *Linn.* ,, 236
Trongum, Lamk. ,, 235
uliginosum, Bl. ,, 229
undatum, Lamk. ,, 235
vagum, *Heyne* ,, 230
verbascifolium, *Linn.* ,, 230
villosum, Lamk. ,, 229
violaceum, Jacq. ,, 234
virginianum, Jacq. ,, 236
Wightii, *Nees* ,, 234
Wightii, Miq. ,, 234
xanthocarpum, *Schrad. & Wendl.* ,, 236
zeilanicum, Scop. ,, 235
Zollingeri, Dunal ,, 232
s.p., Hk. f. & T. ,, 234
Solenanthus, *Ledeb.* iv. 159
angustifolius, Fisch. & Mey. ,, 159
brachystemon, Fisch. & Mey. ,, 159
circinnatus, *Ledeb.* ,, 160
lanatus, A. DC. ,, 159
sp., Hk. f. & T. ,, 159
Solenocarpus, *W. & A.* ii. 27
indica, *W. & A.* ,, 27
Solenostigma consimile, Bl. v. 483
Wightii, Miq. ,, 483
Solenotinus, Oerst. iii. 7
Solidago, *Linn.* iii. 244
cuspidatus, Wall. ,, 296
densiflorus, Wall. ,, 355
floribundus, Wall. ,, 356
heterotrichus, Wall. ,, 295
nepalensis, D. Don ,, 245
pubescens, Wall. ,, 245
rubricaulis, Wall. ,, 296
Virga-aurea, *Linn.* ,, 245
zeylanicus, Arn. ,, 257
Sonchus, *Linn.* iii. 413
arvensis, *Linn.* ,, 414
asper, *Vill.* ,, 414

Sonchus ... Vol. Page
calyculatus, Roxb. ... ... iii. 403
Candolleanus, J. & S. ... „ 415
capitatus, Spreng. ... ... „ 417
ciliatus, Lamk. ... ... „ 414
cyaneus, D. Don ... ... „ 408
ferox, Wall. ... ... „ 414
hastatus, Wall. ... ... „ 408
longifolius, Wall. ... ... „ 414
maritimus, *Linn.* ... ... „ 414
Metzianus, Schultz. ... ... „ 396
oleraceus, *Linn.* ... ... „ 414
oleraceus, Wall. ... ... „ 414
orixensis, Roxb. ... ... „ 414
robustus, Wall. ... ... „ 408
Royleanus, Wall. ... ... „ 414
volubilis, Rumph ... ... „ 335
Wallichianus, DC. ... ... „ 414
Wightianus, DC. ... ... „ 414
Sonerila, *Roxb.* ... ... ii. 529
acaulis, Bedd. ... ... „ 538
affinis, *Arn.* ... ... „ 533
amabilis, Kurz ... ... „ 539
amabilis, *Triana* ... ... „ 533
angustata, *Triana* ... ... „ 536
angustifolia, Roxb. ... ... „ 537
angustifolia, Wall. ... ... iii. 42
arguta, *R. Br.* ... ... ii. 537
Arnottiana, *Thw.* ... ... „ 531
axillaris, Wight ... ... „ 535
begoniæfolia, Bl. ... ... „ 538
Bensoni, *Hk. f.* ... ... „ 540
brachyandra, Naud. ... ... „ 530
Brandisiana, Kurz ... ... „ 537
Brunonis, *W. & A.* ... ... „ 531
bullata, Griff. ... ... „ 540
burmannica, Wall. ... ... „ 530
elegans, *Wight* ... ... „ 535
elegans, Hook. ... ... „ 534
emaculata, Roxb. ... ... „ 537
erecta, *Jack* ... ... „ 530
firma, Thw. ... ... „ 532
Gardneri, *Thw.* ... ... „ 532
glaberrima, Arn. ... ... „ 540
grandiflora, *Wall.* ... ... „ 535
Griffithii, *Clarke* ... ... „ 539
Harveyi, *Thw.* ... ... „ 533
Helferi, *Clarke* ... ... „ 540
heterostemon, *Naud.* ... „ 540
hirsutula, *Arn.* ... ... „ 534
Hookeriana, *Arn.* ... ... „ 532
khasiana, *Clarke* ... ... „ 539
Kurzii, *Clarke* ... ... „ 539
Kurzii, Kurz ... ... „ 534
lanceolata, *Thw.* ... ... „ 535
linearis, *Hk. f.* ... ... „ 536
maculata, *Roxb.* ... ... „ 537
maculata, Rheede ... ... „ 540

Sonerila ... Vol. Page
moluccana, *Roxb.* ... ... ii. 537
Naudiniana, Miq. ... ... „ 541
nudiscapa, *Kurz* ... ... „ 539
obliqua, Korth. ... ... „ 540
orbiculata, Lindl. ... ... „ 534
paradoxa, Naud. ... ... „ 538
pedunculosa, *Thw.* ... ... „ 531
picta, Griff. ... ... „ 537
picta, *Korth.* ... ... „ 536
pilosula, *Thw.* ... ... „ 534
pumila, Thw. ... ... „ 531
Rheedii, Wall. ... ... „ 538
rhombifolia, *Thw.* ... ... „ 533
robusta, *Arn.* ... ... „ 533
rostrata, Thw. ... ... „ 533
Rottleri, Wall. ... ... ii. 530, 531
rotundifolia, *Bedd.* ... ... ii. 538
scapigera, *Dalz.* ... ... „ 538
secunda, *R. Br.* ... ... „ 536
solanoides, Naud. ... ... „ 534
speciosa, *Zenk.* ... ... ii. 534, 540
squarrosa, *Wall.* ... ... ii. 537
stricta, *Hook.* ... ... „ 530
tenera, *Royle* ... ... „ 530
tenera, Wall. ... ... „ 530
tenuifolia, *Bl.* ... ... „ 536
tomentella, *Thw.* ... ... „ 531
travancorica, *Bedd.* ... „ 534
Wallichii, *Benn.* ... ... „ 538
Wightiana, *Arn.* ... ... „ 532
versicolor, *Wight* ... ... „ 535
violæfolia, *Hk. f.* ... ... „ 539
zeylanica, *W. & A.* ... „ 530
sp., Griff. ... ... ii. 530, 537
SONERILEÆ ... ... ii. 513
Sonneratia, *Linn. f.* ... ... ii. 579
acida, *Linn. f.* ... ... „ 579
acida, Benth. ... ... „ 580
alba, *Sm.* ... ... „ 580
alba, Griff. ... ... „ 580
apetala, *Ham.* ... ... „ 579
evenia, Miq. ... ... „ 580
Griffithii, *Kurz* ... ... „ 580
lanceolata, Miq. ... ... „ 580
mossambicensis, Klotz. ... „ 580
? *neglecta*, Bl. ... ... „ 580
obovata, Miq. ... ... „ 580
Pagatpat, Miq. ... ... „ 580
Sophora, *Linn.* ... ... ii. 248
acuminata, *Benth.* ... ... „ 250
alopecuroides, *Linn.* ... „ 250
glauca, *Lesch.* ... ... „ 249
glabra, Hassk. ... ... „ 249
heptaphylla, *Linn.* ... ... „ 250
heptaphylla, Wight ... ... „ 250
Houghiana, Wall. ... ... „ 251
interrupta, *Bedd.* ... ... „ 251

Sophora Vol. Page
mollis, *Grah.* ... ... ii. 251
Moorcroftiana, *Benth.* ... „ 249
robusta, Roxb. ... ... „ 252
tomentosa, *Linn.* ... ... „ 249
velutina, Lindl. ... ... „ 249
violacea, *Thw.* ... ... „ 249
Wightii, *Baker* ... ... „ 250
SOPHOREÆ ... ... ii. 60
Sopubia, *Ham.* ... ... iv. 302
delphinifolia, *G. Don* ... „ 302
stricta, *G. Don* ... ... „ 302
trifida, *Ham.* ... ... „ 302
Sorbus Aucuparia, Linn. ... ii. 376
foliolosa, Dcne. ... ... „ 376
foliosa, Wenzig ... ... „ 377
lanata, Wenzig ... ... „ 375
microphylla, Dcne. ... ... „ 376
nepalensis, Hort. ... ... „ 375
sikkimensis, Wenz. ... ... „ 379
ursina, Dcne. ... ... „ 376
ursina, Wenzig ... ... „ 376
Sorghum, Hack. ... ... vii. 181
barbatum, Hochst. ... ... „ 272
? *bicolor*, Willd. ... ... „ 184
capense, Heyne ... ... „ 182
caucasicum, Griseb. ... „ 176
cernuum, Host ... ... „ 184
dubium, C. Koch ... ... „ 182
fulvum, Beauv. ... ... „ 185
giganteum, Edgew. ... ... „ 182
halepense, Pers. ... ... „ 182
halepense, Wall. ... ... „ 185
Junghuhnii, Miq. ... ... „ 185
muticum, Nees ... ... „ 185
nigrum (lapsu Andropogon) „ 185
parviflorum, Beauv. ... ... „ 179
purpureo-sericeum, Asch. & Schweinf. ... ... „ 186
Ritchiei, Munro ... ... „ 186
saccharatum, Hohen. ... „ 182
saccharatum, Str. & Wint. „ 184
Schreberi, Tenore ... ... „ 182
vulgare, Pers. ... ... vii. 183, 184
Sorindeia madagascariensis, DC. ... ... ii. 7
Sorostachys kyllingioides, Steud. ... ... vi. 602
Southwellia nobilis, Salisb. i. 358
Soyeria blattarioides, Monnier iii. 394
sibirica, Monnier ... ... „ 394
Soymida, *Juss.* ... ... i. 567
febrifuga, *Juss.* ... ... „ 567
Sparganium, *Linn.* ... ... vi. 489
carinatum, Ham. ... ... „ 490
erectum, Kurz ... ... „ 490
ramosum, *Huds.* ... ... „ 490
simplex, *Huds.* ... ... „ 490

Sparganium Vol. Page
stoloniferum, Ham. ... ... vi. 490
Spartina phleoides, Roth ... vii. 236
Spathiostemon javense, Bl. ... v. 455
salicinum, Hassk. ... ... „ 455
Spathium microphyllum, Voigt vi. 565
monostachyum, Edgew. ... „ 564
undulatum, Edgew. ... „ 564
Spathodea adenophylla, A. DC. iv. 381
amœna, A. DC. ... ... „ 384
arcuata, Wight ... ... „ 380
atrovirens, Spreng. ... ... „ 380
crispa, Bureau ... ... „ 380
crispa, Dalz. & Gibs. ... „ 380
crispa, Wall. ... ... „ 379
Diepenhorsti, Miq. ... ... „ 379
falcata, Brand. ... ... „ 380
falcata, Wall. ... ... „ 380
gigantea, Bl. ... ... „ 384
glandulosa, Bl. ... ... „ 383
ignea, Kurz ... ... „ 382
indica, Pers. ... ... „ 378
Lobbii, Teysm. & Binnend. „ 384
longiflora, *Vent.* ... ... „ 379
? *Loureiriana*, DC. ... ... „ 379
Rheedii, Wall. ... ... „ 379
Roxburghii, Spreng. ... „ 381
stipulata, Wall. ... iv. 379, 383
velutina, Kurz ... ... iv. 379
xylocarpa, Brand. ... ... „ 384
Spathodithyros suffruticosus, Hassk. ... ... vi. 374
Spathoglottis, *Bl.* ... ... v. 813
aurea, *Lindl.* ... v. 813, vi. 191
Bensoni, *Hk. f.* ... v. 814, vi. 191
Fortuni, Lindl. ... ... v. 814
Handingiana, *Par. & Rchb. f.* „ 815
ixioides, *Lindl.* ... ... „ 814
khasiana, Griff. ... ... „ 814
Kimbaliana, Hort. ... ... vi. 191
lilacina, Griff. ... ... v. 813
Lobbii, *Rchb. f.* ... v. 814, vi. 191
parvifolia, Lindl. ... ... v. 814
plicata, *Bl.* ... ... „ 813
plicata, Griff. ... . „ 813
pubescens, *Lindl.* v. 814, vi. 191
pubescens, Wight ... ... v. 814
? *trivalvis*, Wall. ... ... vi. 79
Wrayi, *Hk. f.* ... v. 813 vi. 191
Spatholobus, *Hassk.* ... ... ii. 193
acuminatus, *Benth.* ... ... „ 194
crassifolius, *Benth.* ... ... „ 194
gyrocarpus, *Benth.* ... ... „ 193
purpureus, Benth. ... ... „ 194
Roxburghii, *Benth.* ... ... „ 193
Speirema montanum, Hk. f. & T. iii. 423
Spergula, *Linn.* ... ... i. 243
æstivosa, Kœn. ... ... „ 251

Spergula Vol. Page
arvensis, *Linn.* ... ... i. 243
pentandra, *Linn.* ... ... „ 243
rubra, *Dietr.* ... ... „ 244
Spergularia rubra, St. Hil. ... i. 244
Sperlingia opposita, Vahl ... iv. 62
verticillata, Vahl ... ... „ 62
Spermacoce, *Linn.* ... ... iii. 199
angustifolia, Wall. ... ... „ 200
articularis, Linn. f. ... ... „ 201
avana, Wall. ... ... „ 201
Brunonis, Wall. ... ... „ 130
Burmani, DC. ... ... „ 201
calyptera, Dcne. ... ... „ 201
compressa, Wall. ... ... „ 75
corymbosa, Burm. ... ... „ 201
corymbosa, Roth ... ... „ 129
costata, Roxb. ... ... „ 58
exserta, Roxb. ... ... „ 129
filina, Wall. ... ... „ 20[illegible]
Gardneri, Wall. ... ... „ 200
glabra, Roxb. ... ... „ 59
? *hedyotidea*, DC. ... iii. 49, 201
hirta, Rottl. ... ... iii. 201
hispida, *Linn.* ... ... „ 200
hispida, Miq. ... ... „ 59
lasiocarpa, Br. ... ... „ 200
lævis, Roxb. ... ... „ 130
? *lineata*, Roxb. ... ... „ 59
longicaulis, Wall. ... ... „ 201
ocymoides, *Burm.* ... ... „ 200
ocymoides, Wall. ... ... „ 200
? *procumbens*, Linn. ... „ 201
pusilla, DC. ... ... „ 200
pusilla, Wall. ... ... „ 200
ramosa, Wall. ... ... „ 200
ramosissima, Wall. ... ... „ 201
Roxburghiana, Wall. ... „ 200
Roxburghii, Spreng. ... „ 130
scaberrima, *Bl.* ... ... „ 201
scabra, Willd. ... ... „ 201
stricta, *Linn. f.* ... ... „ 200
stricta, Schlecht. ... ... „ 200
sumatrensis, Retz. ... ... „ 129
sumatrensis, Roxb. ... ... „ 131
tenera, Wall. ... ... „ 200
? *teres*, Roxb. ... ... „ 129
triandra, Ham. ... ... „ 200
tubularis, Br. ... ... iii. 60, 201
SPERMACOCEÆ ... ... iii. 21, 199
Spermadictyon azureum, Wall. iii. 197
suaveolens, Roxb. ... ... „ 197
Sphæranthus, *Linn.* ... ... iii. 274
africanus, *Linn.* ... ... „ 275
africanus, Wall. ... ... „ 275
africanus, Willd. ... ... „ 275
amaranthoides, *Burm.* ... „ 274
hirtus, Willd. ... ... „ 275

Sphæranthus Vol. Page
indicus, *Linn.* ... ... iii. 275
indicus, Kurz ... ... „ 275
indicus, Willd. ... ... „ 275
laciniatus, Wall. ... ... „ 276
microcephalus, DC. ... ... „ 275
microcephalus, Willd. ... „ 275
mollis, Roxb. ... ... „ 275
peguensis, *Kurz* ... ... „ 275
zeylanicus, Heyne ... ... „ 274
zeylanicus, Wall. ... ... „ 275
Sphæridiophora abyssinicum, Jaub. & Sp. ... ... ii. 92
linifolium, Desv. ... ... „ 92
Sphærocarpum elegans, Nees vii. 246
Sphærocarya edulis, Wall. ... v. 230
leprosa, Dalz. ... ... i. 570, v. 235
moschifera, Bl. ... ... v. 235
vestita, Wall. ... ... „ 230
Wallichiana, W. & A. ... „ 234
Sphærocaryum, *Nees* ... ... vii. 246
elegans, *Nees* ... ... „ 246
Sphærochloa quinquangularis (*quadrangularis*), Beauv. vi. 582
Sphæromorphæa, *DC.* ... iii. 317
Centipeda, *DC.* ... ... „ 317
Russeliana, *DC.* ... ... „ 317
Sphærophysa pycnorhiza, Benth. ... ... ii. 119
Sphærosacme decandra, Wall. i. 562
fragans, Wall. ... ... „ 562
? *laxa*, Wall. ... ... „ 560
paniculata, Wall. ... ... „ 560
polystachya, Wall. ... ... „ 559
Rohituka, Wall. ... ... „ 560
spectabilis, Wall. ... ... „ 561
spicata, Wall. ... ... „ 559
Sphæroschœnus, Nees ... ... vi. 668
Wallichii, Arn. & Nees ... „ 668
Sphærostema axillare, Bl. ... i. 45
elongatum, Bl. ... ... „ 44
grandiflorum, Hk. f. & T. „ 44
grandiflorum, Wall. ... „ 44
propinquum, Bl. ... ... „ 45
Sphalanthus confertus, Jack ii. 460
Sphenoclea, *Gaertn.* ... ... iii. 437
Pongatium, A. DC. ... ... „ 438
zeylanica, *Gaertn.* ... ... „ 438
sp., Griff. ... ... „ 438
Sphenodesma, *Jack* ... ... iv. 600
acuminata, Wight ... ... „ 602
barbata, *Schau.* ... ... „ 601
eryciboides, *Kurz* .. ... „ 601
ferruginea, Wight ... ... „ 601
Griffithiana, *Wight* ... ... „ 602
grossa, Kurz ... ... „ 601
Jackiana, Schau. ... ... „ 602
Jackiana, Wight ... ... „ 602

Sphenodesma Vol. Page
microstylis, *Clarke* ... ... iv. 600
paniculata, *Clarke* ... ... „ 600
pentandra, *Jack* ... ... „ 602
triflora, *Wight* ... ... „ 601
unguiculata, *Schau.* ... „ 601
Wallichiana, Schau. ... „ 602
? sp., Wall. ... ... „ 601
Sphinctacanthus, *Benth.* ... iv. 544
Griffithii, *Benth.* ... ... „ 544
Sphragidia zeylanica, Thw. v. 341
Sphyranthera, *Hk. f.* ... ... v. 477
capitellata, *Hk. f.* ... ... „ 477
Spicillaria Leschenaultii, A Rich. ... ... iii. 120
Spilanthes, *Linn.* ... ... iii. 307
Acmella, *Linn.* ... ... „ 307
calva, DC. ... ... „ 307
calva, Wight ... ... „ 307
oleracea, Jacq. ... ... „ 307
paniculata, DC. ... ... „ 307
Pseudo-Acmella, Linn. ... „ 307
Spina spinarum, Rumph. ... i. 193
Spinacia, *Linn.* ... ... v. 5
oleracea, *Linn.* ... ... „ 6
tetrandra, Roxb. ... ... „ 6
tetrandra, Stev. ... ... „ 6
Spinifex, *Linn.* ... ... vii. 63
dioicus, Ham. ... ... „ 63
squarrosus, *Linn.* ... ... „ 63
Spiradiclis, *Bl.* ... ... iii. 76
bifida, *Hk. f.* ... ... „ 76
cæspitosa, *Bl.* ... ... „ 76
cylindrica, *Hk. f.* ... ... „ 76
Spiræa, *Linn.* ... ... ii. 323
arcuata, *Hk. f.* ... ... „ 325
argentea, Loud. ... ... „ 326
Aruncus, *Linn.* ... ii. 323, 389
barbata, Wall. ... ... ii. 389
bella, *Sims* ... ... „ 324
brahuica, *Boiss.* ... ... „ 326
callosa, *Thunb.* ... ... „ 324
callosa, Wall. ... ... „ 324
canescens, *D. Don* ... ... „ 325
cantoniensis, Lour. ... ... „ 326
chamædrifolia, Linn. ... „ 326
chamædrifolia, Hk. f. & T. „ 326
cærulescens, Poir. .. ... „ 326
corymbosa, Roxb. ... ... „ 326
cuneifolia, Wall. ... ... „ 325
expansa, Wall. ... ... „ 324
fastigiata, Wall. ... ... „ 324
Fortuni, Planch. ... ... „ 324
glauca, Wall. ... ... „ 324
kamtschatica, Wall. ... „ 323
laxiflora, Lindl. ... ... „ 325
Lindleyana, Wall. ... ... „ 324
micrantha, *Hk. f.* ... ... „ 325

Spiræa Vol. Page
nepalensis, Lodd. ... ... ii. 326
nutans, Royle ... ... „ 326
parvifolia, *Bertol.* ... ... „ 326
pulchella, Kunze ... ... „ 326
rhamnifolia, Wall. ... ... „ 325
sorbifolia, *Linn.* ... ... „ 324
stellata, Wall. ... ... „ 324
triternata, Wall. ... ii. 323, 389
vaccinifolia, *D. Don* ... ii. 325
? vaccinifolia, Lodd. ... „ 326
venustula, Kunth & Bouch. „ 326
vestita, *Wall.* ... ... „ 323
SPIRÆÆ ... ... ii. 307
Spiranthera pentaphylla, Bojer ... ... iv. 202
Turpethum, Bojer ... ... „ 212
Spiranthes, *Rich.* ... vi. 102, 180
amœna, Bunge ... ... vi. 102
australis, *Lindl.* ... ... „ 102
australis, Wight ... ... „ 103
autumnalis, *Rich.* ... ... „ 103
densa, A. Rich. ... ... „ 103
flexuosa, Lindl. ... ... „ 102
longispicata, A. Rich. ... „ 102
macrophylla, Spreng. ... „ 130
monophylla, Spreng. ... „ 131
Novæ Zelandicæ, Hk. ... „ 102
parviflora, Lindl. ... „ 102
pudica, Lindl. ... ... „ 102
unalaschcensis, Spreng. ... „ 130
Wightiana, Lindl. ... ... „ 103
sp., Griff. ... ... „ 102
Spirodela melanorrhiza, F. Muell., vide *Lemna* ... vi. 557
oligorrhiza, Hegelm. ... „ 557
pleioirrhiza, F. Muell., vide *Lemna* ... ... „ 557
polyrrhiza, Schleid. ... „ 557
SPIROLOBEÆ ... ... v. 2
Spirostemon spiralis, Griff. ... iii. 650
Splitgerbera macrostachya, Wight ... ... v. 578
scabrella, Dalz. & Gibs. ... „ 578
Spodiopogon, *Trin.* ... ... vii. 108
albidus, *Benth.* ... ... „ 108
angustifolius, Trin. vi. 664, vii. 129
Blumii, Nees ... ... vii. 136
ciliaris, Nees ... ... „ 133
conjugatus, Voigt ... ... „ 131
cotulifer, *Hack.* ... ... „ 108
dubius, *Hack.* ... ... „ 108
laniger, Nees ... ... „ 129
Lehmanni, Griseb. ... ... „ 139
notopogon, Nees ... ... „ 129
obliquivalvis, Nees ... ... „ 133
petiolaris, Trin. ... ... „ 139
pilosus, Nees ... ... „ 130

Spodiopogon Vol. Page
rivalis, Thw. ... ... vii. 135
scrobiculatus, Nees ... ... ,, 134
semisagittatus, Steud. ... , 130
villosus, Nees ... ... ,, 134
zeylanicus, Nees ... ... ,, 134
sp., Hk. f. & T. ... ... ,, 135
sp., Wall. ... ... vii. 126, 134, 136
Spondias, *Linn.* ... ... ii. 42
acuminata, *Roxb.* ... ... ,, 42
amara, Lamk. ... ... ,, 42
axillaris, *Roxb.* ... ... ,, 42
dulcis, Willd. ... ... ,, 42
elliptica, Rottl. ... ... ,, 23
? **macrophylla**, *Wall.* ... ,, 43
mangifera, *Willd.* ... ... ,, 42
simplicifolia, Rottl. ... ... ,, 23
? *sp.*, Wall. ... ... ii. 12, 42
SPONDIEÆ ... ... ii. 8
Sponia amboinensis, Dcne. ... v. 484
amboinensis, Miq. ... ... ,, 484
angustifolia, Planch. ... ,, 484
annulata, Teysm. & Binn. ,, 485
Burmanni, Planch. ... ... ,, 484
Griffithii, Planch. ... ... ,, 484
orientalis, Planch. ... ... ,, 484
subserrata, Kurz ... ... ,, 486
timorensis, Dcne. ... ... ,, 483
velutina, Miq. ... ... ,, 484
velutina, Planch. ... ... ,, 484
virgata, Planch. ... ... ,, 483
Wightii, Planch. ... ... ,, 484
Sporobolus, *Br.* ... ... vii. 247
angustus, Buckl. ... ... ,, 248
arabicus, *Boiss.* ... ... ,, 252
capillaris, Arn. ... ... ,, 252
ciliatus, Munro ... ... ,, 251
ciliatus, Presl ... ... ,, 252
commutatus, Kunth ... ... ,, 253
coromandelianus, *Kunth* ,, 252
diander, *Beauv.* ... ... ,, 247
discosporus, Nees ... ... ,, 253
elongatus, Br. ... ... ,, 248
geniculatus, Nees ... ... ,, 250
glaucifolius, *Hochst.* ... ,, 250
humifusus, Trim. ... ... ,, 251
indicus, *Br.* ... ... ,, 247
ioclados, *Nees* ... ... ,, 249
Lamarckii, Desv. ... ... ,, 248
littoralis, Kunth ... ... ,, 249
minor, Kunth ... ... ,, 248
minutiflorus, *Link* ... ... ,, 248
orientalis, *Kunth* ... ... ,, 251
orientalis, Trim. ... ... ,, 250
orientalis, Wight ... ... ,, 251
pallidus, Boiss. ... ... ,, 252
piliferus, *Kunth* ... ... ,, 251
pulchellus, *Br.* ... ... ,, 252
Sporobolus Vol. Page
pungens, Kunth ... ... vii. 249
spicatus, *Kunth* ... ... ,, 250
tenacissimus, Beauv. ... ,, 248
tremulus, *Kunth* ... ... ,, 250
virginicus, *Kunth* ... ... ,, 249
Wallichii, *Munro* ... .. ,, 248
sp., Griff. ... ... ,, 247
sp., Wall. ... vii. 42, 247, 248, 249, 250, 251, 252, 256
Springia indica, Muell. & Van. H. ... ... iii. 670
STACHYDEÆ ... ... iv. 606
Stachyopogon pauciflorus, Klotz. ... ... vi. 264
spicatus, Klotz. ... ... ,, 264
Stachys, *Linn.* ... ... iv. 675
Artemisiæ, Lour. ... ... ,, 678
floccosa, *Benth.* ... ... ,, 675
macrocheilos, Boiss. ... ... ,, 677
melissæfolia, *Benth.* ... ,, 675
oblongifolia, *Benth.* ... ... ,, 676
oblongifolia, Benth. ... ... ,, 675
palustris, *Linn.* ... ... ,, 676
parviflora, *Benth.* ... ... ,, 677
scaberula, *Vatke* ... ... ,, 676
sericea, *Wall.* ... ... ,, 675
splendens, Wall. ... ... ,, 675
sylvatica, *Linn.* ... ... ,, 676
tibetica, *Vatke* ... ... ,, 676
vestita, Benth. ... ... ,, 675
sp., Hk. f. & T. ... ... ,, 677
Stachytarpha, vide seq.
Stachytarpheta, *Vahl* ... iv. 564
indica, *Vahl* ... ... ,, 564
indica, Schau. ... ... ,, 564
jamaicensis, Schau. ... ... ,, 564
jamaicensis, Vahl ... ... ,, 564
urticifolia, Dalz. & Gibs. ... ,, 564
villosa, Turcz. ... ... ,, 565
Stachyurus, *S. & Z.* ... ... i. 288
himalaicus, *Hk. f. & T.* ... ,, 288
Stadmannia pubescens, Spreng. i. 681
trijuga, Spreng. ... ... ,, 681
Stagmaria verniciflua, Jack? ii. 25
Stalagmites ovalifolius, G. Don i. 269
Stapelia adscendens, Roxb. ... iv. 76
Callamulia, Ham. ... ... ,, 77
involucrata, Herb. Madr. ,, 47
umbellata, Roxb. ... ... ,, 77
Staphylea, *Linn.* ... ... i. 698
Emodi, *Wall.* ... ... ,, 698
indica, Burm. ... ... ,, 667
trifolia, Linn. ... ... ,, 698
STAPHYLEÆ ... ... i. 669
Statice, *Linn.* ... ... iii. 479
cabulica, *Boiss.* ... ... ,, 480
lycopodioides, Gir. ... ... ,, 479

Statice Vol. Page
macrorrhabdos, *Boiss.* ... iii. 480
Stooksii, *Boiss.* ... „ 480
sp., Hk. f. ... „ 480
STATICEÆ ... iii. 478
Stauntonia angustifolia, Wall. i. 108
Brunoniana, Wall. ... „ 108
latifolia, Wall. ... „ 108
Stauranthera, *Benth.* ... iv. 371
? **Brandisii**, *Clarke* ... „ 372
grandiflora, *Benth.* ... „ 371
grandifolia, Br. ... „ 371
umbrosa, *Clarke* ... „ 371
Stauritis violacea, Rchb. f. ... vi. 29
Staurogyne angustifolia, Wall. iv. 398
argentea, Wall. ... „ 398
sp., Wall. ... „ 398
Stauropsis, *Rchb. f.* ... vi. 27
giganteus, *Benth.* ... „ 27
undulatus, *Benth.* ... „ 27
Stegoasia cochinchinensis, Lour. ... vii. 156
Stelechocarpus, *Bl.* ... i. 47
Burahol, *Bl.* ... „ 47
Stelis caudata, D. Don ... v. 758
hirta, Sm. ... „ 762
odoratissima, Sm. ... „ 758
Stellaria, *Linn.* ... i. 229
aquatica, *Scop.* ... „ 229
aquatica, Poll. ... „ 233
bulbosa, *Wulf.* ... „ 231
cerastioides, Linn. ... „ 227
crispata, *Wall.* ... „ 229
decumbens, *Edgew.* ... „ 234
depauperata, *Edgew.* ... „ 234
drymarioides, *Thw.* ... „ 229
Fenzliana, Klotz. ... „ 232
glauca, *With.* ... „ 233
graminea, *Linn.* ... „ 233
lanata, *Hk. f.* ... „ 232
latifolia, *Edgew. & Hk. f.* „ 231
longissima, *Wall.* ... „ 232
media, *Linn.* ... „ 230
media, Wight ... „ 229
mollis, Klotz. ... „ 232
monogyna, D. Don ... „ 230
monosperma, D. Don ... „ 229
paniculata, *Edgew.* ... „ 229
patens, D. Don ... „ 232
petræa, Bunge ... „ 234
petræa, Hk. f. & T. ... „ 234
saxatilis, *Ham.* ... „ 232
semivestita, *Edgew.* ... „ 230
sikkimensis, *Hk. f.* ... „ 230
subumbellata, *Edgew.* ... „ 233
thymifolia, Wall. ... „ 233
tibetica, *Kurz* ... „ 231
uliginosa, *Linn.* ... „ 233
Stellaria Vol. Page
umbellata, Turcz. ... i. 234
Webbiana, *Edgew. & Hk. f.* „ 230
Stellera, *Linn.* ... v. 196
altaica, Thieb. ... „ 196
Chamæjasme, *Linn.* ... „ 196
concinna, Edgew. ... „ 196
hypericifolia, Endl. ... „ 196
Passerina, Linn. ... „ 194
Stemodia, *Linn.* ... iv. 265
aquatica, Willd. ... „ 269
arvensis, Steud. ... „ 265
balsamea, Benth. ... „ 266
camphorata, Vahl ... „ 264
capitata, Benth. ... „ 264
cimicina, Benth. ... „ 267
cærulea, Benth. ... „ 263
diffusa, Benth. ... „ 268
grandiflora, Ham. ... „ 261
gratioloides, Benth. ... „ 267
hirsuta, Heyne ... „ 268
hypericifolia, Benth. ... „ 269
lutea, Moon ... „ 264
macrostachya, Benth. ... „ 262
maritima, Heyne ... „ 265
Menthastrum, Benth. ... „ 266
micrantha, Benth. ... „ 267
minuta, G. Don ... „ 281
muraria (*muralis*), Roxb. „ 262
philippensis, Cham. ... „ 261
repens, Benth. ... „ 266
ruderalis, Vahl ... „ 262
serrata, *Benth.* ... iv. 265, 266
sessilis, Benth. ... iv. 266
sessilis, Wall. ... „ 266
tenuiflora, Benth. ... „ 266
tenuiflora, Wall. ... „ 266
? *tomentosa*, G. Don ... „ 259
viscosa, *Roxb.* ... „ 265
sp., Griff. ... „ 261
Stemona, *Lour.* ... vi. 298
Curtisii, *Hk. f.* ... „ 298
gloriosoides, Voigt ... „ 298
Griffithiana, *Kurz* ... „ 299
minor, *Hk. f.* ... „ 298
tuberosa, *Lour.* ... „ 298
Stemonoporus affinis, Thw. i. 314
canaliculatus, Thw. ... „ 315
Gardneri, Thw. ... „ 314
lanceolatus, Thw. ... „ 315
? *Moonii*, Thw. ... „ 316
nitidus, Thw. ... „ 316
oblongifolius, Thw. ... „ 315
petiolaris, Thw. ... „ 315
reticulatus, Thw. ... „ 316
rigidus, Thw. ... „ 315
Wightii, Thw. ... „ 314
Stemonurus affinis, Miers ... i. 587

Stemonurus Vol. Page
apicalis, Miers ... ... i. 584
axillaris, Miers ... ... „ 586
ceylanicus, Miers ... ... „ 586
coriaceus, Miers ... ... „ 586
? *crassipes*, Kurz ... ... „ 587
? *fœtidus*, Wight ... ... „ 589
Gardneri, Miers ... ... „ 586
Heyneanus, Miers ... ... „ 586
longifolius, Miers ... ... „ 586
penangianus, Miers ... ... „ 587
polymorphus, Miers ... ... „ 586
prasinus, Bl. ... ... „ 587
secundiflorus, Bl. ... ... „ 584
? *tomentellus*, Kurz ... ... „ 587
Walkeri, Miers ... ... „ 586
Stenactis bellidioides, Nees iii. 256
multiradiata, Lindl. ... „ 256
Stenarrhena lanata, D. Don iv. 654
Stenaster, sp. ... ... vi. 284
Stenochasma convolutum, Griff. vi. 236
urceolare, Griff. ... ... „ 237
Stenosiphonium, *Nees* . iv. 426
confertum, *Nees* ... ... „ 427
confertum, T. Anders. ... „ 427
diandrum, *Wight* ... ... „ 426
diandrum, Nees ... ... „ 432
parviflorum, *T. Anders.* ... „ 428
Russellianum, *Nees* ... „ 427
Russellianum, Wight ... „ 427
setosum, *T. Anders.* ... „ 427
subsericeum, Nees ... ... „ 427
zeylanicum, T. Anders. ... „ 445
Stenosolenium perenne,
Schrenk ... ... iv. 177
Stenotaphrum, *Trin.* ... ... vii. 90
americanum, Schrank ... „ 90
complanatum, Schrank ... „ 90
dimidiatum, Brong. ... „ 90
glabrum, *Trin.* ... ... „ 90
Helferi, *Munro* ... ... „ 91
Koenigii, Schrank ... ... „ 90
madagascariense, Kunth ... „ 90
sarmentosum, Nees ... ... „ 90
Swartzianum, Nees ... ... „ 90
sp., Wall. ... ... „ 91
Stephania, *Lour.* ... ... i. 102
elegans, *Hk. f. & T.* ... ... „ 103
glabra, Miers ... ... „ 103
glandulifera, Miers ... ... „ 103
hernandifolia, *Walp.* ... „ 103
hypoglauca, Miers ... ... „ 103
intertexta, Miers ... ... „ 103
japonica, Miers ... ... „ 103
latifolia, Miers ... ... „ 103
longa, Miers ... ... „ 103
rotunda, *Lour.* ... ... „ 103
Roxburghiana, Miers ... „ 103

Vol. Page
Stephanotis, *Thouars* ... ... iv. 38
Maingayi, *Hk. f.* ... ... „ 39
Stephegyne, *Korth.* ... ... iii. 25
diversifolia, *Hk. f.* ... ... „ 26
parvifolia, *Korth.* ... ... „ 25
tubulosa, *Hk. f.* ... ... „ 25
Sterculia, *Linn.* ... ... i. 354
affinis, *Mast.* ... ... „ 361
alata, *Roxb.* ... ... „ 360
alata, Wall. ... ... „ 356
angustifolia, Jack ... ... „ 358
angustifolia, Roxb. ... ... „ 358
armata, *Mast.* ... ... „ 357
Balanghas, *Linn.* ... ... „ 358
Balanghas, Roxb. ... ... „ 358
bicolor, *Mast.* ... ... „ 359
campanulata, *Wall.* ... „ 362
coccinea, *Roxb.* ... ... „ 357
coccinea, Jack ... ... „ 357
coccinea, Wall. ... ... „ 360
colorata, *Roxb.* ... ... „ 359
cuneata, Heyne ... ... „ 356
ensifolia, *Mast.* ... ... „ 359
fœtida, *Linn.* ... ... „ 354
fulgens, *Wall.* ... ... „ 360
fulgens, Wall. ... ... „ 360
guttata, *Roxb.* ... ... „ 355
Heynii, Bedd. ... ... „ 360
Jackiana, Wall. ... ... „ 358
lævis, *Wall.* ... ... „ 357
lanceæfolia, Roxb. ... ... „ 356
lanceolata, Ham. ... ... „ 357
linearicarpa, *Mast.* ... ... „ 360
linguifolia, *Mast.* ... ... „ 357
macrophylla, *Vent.* ... ... „ 356
Maingayi, *Mast.* ... ... „ 359
mollis, Wall. ... ... „ 358
nobilis, *Br.* ... ... „ 358
ovalifolia, Wall. ... ... „ 356
parviflora, *Roxb.* ... ... „ 359
parvifolia, *Wall.* ... ... „ 356
populifolia, *Roxb.* ... ... „ 361
populifolia, W. & A. ... „ 361
pubescens, *Mast.* ... ... „ 357
punduana, Wall. ... ... „ 364
Roxburghii, *Wall.* ... ... „ 356
rubicunda, Wall. ... ... „ 360
rubiginosa, *Vent.* ... ... „ 358
scaphigera, *Wall.* ... ... „ 361
striatiflora, *Mast.* ... ... „ 356
Thwaitesii, *Mast.* ... ... „ 361
tubulata, *Mast.* ... ... „ 362
urens, *Roxb.* ... ... „ 355
versicolor, *Wall.* ... ... „ 355
villosa, *Roxb.* ... ... „ 355
STERCULIACEÆ ... ... i. 353
STERCULIEÆ ... ... i. 353

Vol. Page
Stereochilus, Lindl. ... ... vi. 33
hirtus, Lindl. ... ... „ 35
Stereoderma javanicum, Bl. iii. 612
Stereospermum, *Cham.* ... iv. 382
chelonoides, *DC.* ... ... „ 382
fimbriatum, *DC.* ... ... „ 383
? Ghorta, *Clarke* ... ... „ 384
glandulosum, *Miq.* ... ... „ 383
hypostictum, *Miq.* ... ... „ 384
neuranthum, *Kurz* ... ... „ 382
serrulatum, DC. ... ... „ 380
suaveolens, *DC.* ... ... „ 382
? Wallichii, *Clarke* ... ... „ 383
xylocarpum, *Wight* ... ... „ 383
sp., Hk. f. & T. ... ... „ 585
Steudnera, *C. Koch* ... ... vi. 519
assamica, *Hk. f.* ... ... „ 520
capitellata, *Hk. f.* ... ... „ 521
colocasiæfolia, *C. Koch* ... „ 520
colocasiæfolia, Hk. f. ... „ 520
colocasioides, *Hk. f.* ... „ 520
discolor, *Hort.* ... ... „ 520
Griffithii, *Schott* ... ... „ 520
Stichoneuron, *Hk. f.* ... ... vi. 299
membranaceum, *Hk. f.* ... „ 299
Stictophyllum glabrum, Edgew. iii. 382
Stigmarota (*Stigmarosa*)
Jangomas, Lour. ... ... i. 193
Stilago Bunius, Linn. ... ... v. 358
diandra, Roxb. ... ... „ 361
lanceolaria, Roxb. ... ... „ 361
tomentosa, Roxb. ... ... „ 357
Stilbanthus, *Hk. f.* ... ... iv. 729
scandens, *Hk. f.* ... ... „ 729
Stillingfleetia sebifera, Boj. v. 470
Stillingia Agallocha, Baill. v. 472
asperococca, Baill. ... ... „ 475
bingyrica, Baill. ... ... „ 471
Chamælea, Baill. ... ... „ 475
discolor, Champ. ... ... „ 469
himalayensis, Klotz. v. 471, 473
indica, Baill. ... ... v. 471
paniculata, Miq. ... ... „ 470
sebifera, Michx. ... ... „ 470
sinensis, Baill. ... ... „ 470
virgata, Baill. ... ... „ 471
Stipa, *Linn.* ... ... vii. 228
altaica, Trin. ... ... „ 233
aperta, Janka ... ... „ 230
appendiculata, Janka ... „ 230
arguens, Linn. ... ... „ 211
aristoides, Stapf ... ... „ 227
basi-plumosa, *Munro* ... „ 229
breviflora, *Griseb.* ... ... „ 233
capensis, Nees ... ... „ 231
capillaris, Gronov. ... ... „ 230
capillata, *Linn.* ... ... „ 230

Stipa Vol. Page
comata, Trin. & Rupr. ... vii. 231
concinna, *Hk. f.* ... ... „ 230
Duthiei, *Hk. f.* ... ... „ 232
erecta, Hort. Madr. ... ... „ 230
eriocaulis, Borb. ... ... „ 230
gallica, Janka ... ... „ 230
Grafiana, Stev. ... ... „ 230
Hookeri, *Stapf* ... ... „ 232
humilis, Brot. ... ... „ 231
Jacquemontii, *Jaub. & Sp.* „ 232
juncea, Lamk. ... ... „ 230
Lagascæ, Guss. ... ... „ 230
littorea, Burm. ... ... „ 63
mongolica, *Turcz.* ... ... „ 229
orientalis, *Trin.* ... ... „ 229
orientalis, Trin. ... ... „ 233
Orthoraphium, *Steud.* ... „ 233
paleacea, Sibth. & Sm. ... „ 231
pallida, Munro ... ... „ 231
pennata, *Linn.* ... ... „ 230
pulcherrima, C. Koch ... „ 230
purpurea, *Griseb.* ... ... „ 229
Richteriana, Hk. f. & T. ... „ 229
robusta, Duthie ... ... „ 232
sareptana, Beck. ... ... „ 231
Semenovii, Krassn. ... ... „ 229
seminuda, Vahl ... ... „ 231
sibirica, *Lamk.* ... ... „ 231
Spinifex, Linn. ... ... „ 63
splendens, *Trin.* ... ... „ 232
Szovitziana, Duthie .. ... „ 229
tartarica, Jacquem. ... „ 229
tauricola, Janka ... ... „ 230
Tirsa, Stev. ... ... „ 230
tortilis, *Desf.* ... ... „ 231
ukranensis, Lamk. ... ... „ 231
ukranica, Steud. ... ... „ 231
Varouini, Krassn. ... ... „ 231
Stipellaria mollis, Benth. ... v. 420
tileæfolia, Benth. ... ... „ 421
villosa, Benth. ... ... „ 421
Stomatocalyx Griffithianus,
Muell. ... ... v. 468
Strabonia gnaphalodes, DC. iii. 299
Stracheya, *Benth.* ... ... ii. 147
tibetica, *Benth.* ... ... „ 147
Strakæa melastomæfolia, Presl v. 73
Stramonium vulgatum, Gaertn. iv. 242
Stranvæsia, *Lindl.* ... ... ii. 382
glaucescens, *Lindl.* ... ... „ 382
glaucescens, Dcne. ... ... „ 383
Nussia, Dcne. ... ... „ 383
STRATIOTEÆ ... ... v. 658
Stratiotes acoroides, Linn. f. v. 663
alismoides, Linn. ... ... „ 662
Stravadium, Juss. ... ... ii. 508
acuminatum, Wall. ... ... „ 509

Stravadium Vol. Page
acutangulum, Miers ... ii. 508
album, DC. ... ... „ 507
angustum, Wall. ... „ 509
demissum, Miers ... ... „ 503
globosum, Miers ... ... „ 508
gracile, Miers ... ... „ 508
obtusangulum, Miers ... „ 508
Rheedii, Miers ... ... „ 508
rubrum, DC. ... ... „ 507
rubrum, Wall. ... . „ 508
Streblosa tortilis, Korth. ... iii. 169
Streblus, *Lour.* ... ... v. 489
asper, *Lour.* ... ... „ 489
mitis, *Kurz* ... ... „ 489
taxoides, Kurz ... ... „ 488
zeylanica, Kurz ... ... „ 488
Streptachne ? sp. Wall. ... vii. 233
Streptia crinita, Rich. ... vii. 333
secunda, Rich. ... ... „ 333
Streptium asperum, Roxb. ... iv. 565
Streptocaulon, *W. & A.* ... iv. 9
calophyllum, Wight ... „ 12
extensum, Wight ... ... „ 11
Griffithii, *Hk. f.* ... ... „ 10
Hamiltonii, Wight ... ... „ 11
Horsfieldii, Miq. ... ... „ 11
Kleinii, *W. & A.* ... ... „ 9
sylvestre, *Wight* ... ... „ 10
tomentosum, *W. & A.* ... „ 10
Wallichii, *W. & A.* ... ... „ 9
Streptogyna, *Beauv.* ... ... vii. 332
crinita, *Beauv.* ... ... „ 333
guianensis, Rich. ... ... „ 333
Streptolirion, *Edgew.* ... ... vi. 389
Griffithii, Kurz ... ... „ 389
volubile, *Edgew.* ... ... „ 389
Streptopus, *Michx.* ... ... vi. 322
candidus, Wall. ... ... „ 322
chinensis, Sm. ... ... „ 360
peduncularis, Sm. ... ... „ 360
simplex, *D. Don* ... ... „ 322
Streptostigma viridiflorum, Thw. i. 692
Striga, *Lour.* ... ... iv. 298
coccinea, Benth. ... ... „ 299
densiflora, *Benth.* ... ... „ 299
euphrasioides, *Benth.* ... „ 299
glabrata, Benth. ... ... „ 299
hirsuta, Benth. ... ... „ 299
lutea, *Lour.* ... ... „ 299
Masuria, *Benth.* ... ... „ 300
orchidea, Hochst. ... ... „ 299
orobanchoides, *Benth.* ... „ 299
phœnicea, Benth. ... ... „ 299
pusilla, Hochst. ... ... „ 299
sulphurea, *Dalz. & Gibs.* „ 300
Strobidia conchigera, Kuntze vi. 253
Strobila hispidissima, G. Don iv. 176

Vol. Page
Strobilanthes, *Bl.* ... ... iv. 429
acrocephalus, *T. Anders.*... „ 454
acuminatus, *T. Anders.* ... „ 430
acuminatus, T. Anders. ... „ 455
adenophorus, *Bedd.* ... „ 440
adenophorus, Nees ... ... „ 437
adnatus, *Clarke* ... ... „ 436
agrestis, *Clarke* ... ... „ 466
alatus, *Nees* ... ... „ 464
amabilis, *Clarke* ... ... „ 476
amplectens, Nees ... ... „ 453
anceps, *Nees* ... ... „ 442
Andersonii, *Bedd.* ... ... „ 450
angustifrons, *Clarke* ... „ 466
anisophyllus, *T. Anders.* ... „ 462
argutus, Nees ... ... „ 474
Arnottianus, *Nees* ... ... „ 442
asper, *Wight* ... ... „ 452
asperrimus, *Nees* ... ... „ 443
asperrimus, Dalz. & Gibs. „ 444
atropurpureus, *Nees* ... „ 472
attenuatus, Nees .. iv. 414, 464
auriculatus, *Nees* ... ... iv. 453
barbatus, *Nees* ... ... „ 437
Beddomei, T. Anders. ... „ 474
biceps, T. Anders. ... ... „ 429
boerhavioides, *T. Anders.* „ 469
bolamputtensis, *Bedd.* ... „ 451
Brandisii, *T. Anders.* ... „ 448
Brunonianus, *Nees* ... ... „ 457
burmanicus, Kurz ... ... „ 425
callosus, *Nees* ... ... „ 451
callosus, Nees ... ... „ 451
calycinus, *T. Anders.* ... „ 450
calycinus, Nees ... ... „ 450
campanulatus, Wight ... „ 444
canaricus, *Bedd.* ... ... „ 434
capitatus, *T. Anders.* ... „ 459
caudatus, *T. Anders.* ... „ 441
cerinthoides, Nees ... ... „ 474
Championi, T. Anders. ... „ 468
ciliatus, *Nees* ... ... „ 439
ciliatus, T. Anders. ... „ 439
collinus, *Nees* ... ... „ 465
coloratus, *T. Anders.* ... „ 473
coloratus, Nees ... ... iv. 443, 450
consanguineus, *Clarke* ... iv. 435
consanguineus, T. Anders. iv. 432, 435
cratægifolius, *T. Anders.* iv. 463
crinitus, T. Anders. ... „ 473
crispus, T. Anders. ... ... „ 446
cuspidatus, *T. Anders.* ... „ 435
Dalhousianus, *Clarke* ... „ 460
Dalzellii, T. Anders. ... „ 443
dasyspermus, *Kurz* ... „ 461
debilis, *Clarke* ... ... „ 467
? decurrens, *Nees* ... ... „ 440

Strobilanthes	Vol.	Page
decurrens, T. Anders.	iv.	436
deflexus, *T. Anders.*	„	433
denticulatus, *T. Anders.*	„	465
discolor, *T. Anders.*	„	462
divaricatus, *T. Anders.*	„	468
Dupeni, *Bedd.*	„	453
durus, T. Anders.	„	447
echinatus, Nees	„	447
Edgeworthianus, Nees	„	453
elongatus, *Clarke*	„	470
eriocephalus, T. Anders	„	444
exareolatus, *Clarke*	„	432
exsertus, *Clarke*	„	445
extensus, *Nees*	„	463
extensus, Bedd.	„	464
Falconeri, *T. Anders.*	„	449
farinosus, *Clarke*	„	470
fimbriatus, *Nees*	„	447
fimbriatus, T. Anders.	„	456
fimbriatus, Kurz	„	456
flaccidifolius, *Nees*	„	468
flaccidus, Mann	„	468
flavus, Kurz	„	426
fœtidissimus, *Kurz*	„	431
foliosus, *T. Anders.*	„	433
Gardnerianus, *T. Anders.*	„	446
geniculatus, *Clarke*	„	459
glabratus, *Nees*	„	447
glandulosus, *Kurz*	„	467
glaucescens, Nees	„	425
glomeratus, *T. Anders.*	„	448
glutinosus, *Nees*	„	458
glutinosus, Grah.	„	444
Goldfussia, Dalz. & Gibs.	„	462
gossypinus, *T. Anders.*	„	434
gracilis, *Bedd.*	„	474
gracilis, T. Anders.	„	459
Grahamianus, Wight	„	451
Griffithianus, T. Anders.	„	470
haplanthoides, *T. Anders.*	„	476
Helferi, *T. Anders.*	„	456
helicoides, *T. Anders.*	„	475
Helictus, *T. Anders.*	„	469
heteromallus, *T. Anders.*	„	437
heteromallus, T. Anders.	„	426
Heyneanus, *Nees*	„	443
hirsutissimus, Nees	„	474
homotropus, *Nees*	„	474
Hookeri, *Nees*	„	449
hypoleucus, T. Anders.	„	432
imbricatus, *Nees*	„	455
inflatus, *T. Anders.*	„	471
interruptus, Benth.	„	474
involucratus, Bl.	„	444
isophyllus, *T. Anders.*	„	462
ixiocephalus, *Benth.*	„	444
jeyporensis, *Bedd.*	„	436

Strobilanthes	Vol.	Page
Karensium, Kurz	iv.	449
khasyanus, *T. Anders.*	„	436
Kunthianus, *T. Anders.*	„	434
lachenensis, *Clarke*	„	465
lævigatus, *Clarke*	„	467
lamiifolius, *T. Anders.*	„	463
lamiifolius, T. Anders.	„	463
lamioides, *T. Anders.*	„	477
? lanatus, *Nees*	„	477
lanceolatus, *Nees*	„	437
lancifolius, *T. Anders.*	„	465
laxus, *T. Anders.*	„	450
longipes, *Clarke*	„	455
lupulinus, *Nees*	„	443
lupulinus, T. Anders.	iv.	443, 444
lupulinus, Benth.	iv.	444
luridus, *Wight*	„	450
Maclellandi, *Clarke*	„	453
macrostachyus, Benth.	„	442
macrostegius, *Clarke*	„	456
maculatus, *Nees*	„	457
maculatus, T. Anders.	„	458
Maingayi, *Clarke*	„	448
Mastersi, *T. Anders.*	„	476
micranthus, *Wight*	„	444
microcarpus, *T. Anders.*	„	466
monadelphus, *Nees*	„	457
multidens, *Clarke*	„	461
mysurensis, Nees	iv.	477, 496
Neesianus, Wight	iv.	444
Neesii, *Kurz*	„	476
neglectus, T. Anders.	„	435
neilgherrensis, *Bedd.*	„	438
Newii, *Bedd.*	„	464
nigrescens, *T. Anders.*	„	433
nobilis, *Clarke*	„	471
nutans, *T. Anders.*	„	454
oligocephalus, *T. Anders.*	„	461
pallidus, T. Anders.	„	440
Panichanga, *T. Anders.*	„	473
paniculatus, *T. Anders.*	„	475
paniculatus, Bedd.	„	475
papillosus, *T. Anders.*	„	445
Parishii, *Clarke*	„	431
parviflorus, Bedd.	„	439
paucinervius, *T. Anders.*	„	470
pauper, *Clarke*	„	463
pectinatus, *T. Anders.*	„	447
pentstemonoides, *T. Anders.*	„	460
pentstemonoides, T. Anders.	„	460
perfoliatus, *T. Anders.*	„	458
Perrottetianus, *Nees*	„	439
petiolaris, *Nees*	„	458
petiolaris, Nees	„	457
phyllocaulos, *Clarke*	„	464
phyllostachyus, *Kurz*	„	446
plumulosus, Nees	„	453

Strobilanthes Vol. Page
polythrix, *T. Anders.* ... iv. 456
pterocaulis, Kurz ... ... „ 455
pulcherrimus, *T. Anders.* „ 475
pulneyensis, *Clarke* ... „ 438
punctatus, Bedd. ... ... „ 438
punctatus, Nees ... ... „ 442
quadrangularis, *Clarke* ... „ 460
reflexus, Nees ... ... „ 464
remotus, *T. Anders.* ... „ 476
rhamnifolius, *T. Anders.* „ 433
rhombifolius, *Clarke* ... „ 461
rhytisperma, *Clarke* ... „ 432
roseus, Wall. ... ... „ 429
rubescens, *T. Anders.* ... „ 469
rubicundus, *T. Anders.* ... „ 475
rubicundus, T. Anders. ... „ 475
rufescens, *T. Anders.* ... „ 430
rugosus, Wight ... ... „ 443
Sabinianus, *Nees* ... ... „ 454
salicifolius, T. Anders. ... „ 429
scaber, *Nees* ... ... „ 446
scaber, T. Anders. ... ... „ 426
scrobiculatus, *Dalz.* ... „ 445
secundus, *T. Anders.* ... „ 468
sessilis, *Nees* ... ... iv. 452, 461
sessiloides, Dalz. & Gibs. iv. 452
sessiloides, Wight ... ... „ 452
sexennis, *Nees* ... ... „ 474
sexennis, Bedd. ... ... „ 474
Simonsii, *T. Anders.* ... „ 447
spicatus, *T. Anders.* ... „ 477
stenodon, *Clarke* ... ... „ 432
stenophyllus, *Clarke* ... „ 472
subcapitatus, *Clarke* ... „ 455
subnudatus, *Clarke* ... „ 472
subflaccidus, Kurz ... ... „ 430
tamburensis, *Clarke* ... „ 454
tener, Nees ... ... „ 443
tetrapterus, Dalz. ... ... „ 437
Thomsoni, *T. Anders.* ... „ 467
Thwaitesii, *T. Anders.* ... „ 441
trifidus, *Nees* ... ... „ 443
tristis, *T. Anders.* ... ... „ 441
urophyllus, *Nees* ... ... „ 472
verruculosus, Nees ... ... „ 477
vestitus, *Nees* ... ... „ 419
violaceus, *Bedd.* ... ... „ 474
violæfolius, *T. Anders.* ... „ 477
viscosus, *T. Anders.* ... „ 431
Walkeri, *Nees* ... ... iv. 440, 476
Wallichii, *Nees* ... ... iv. 471
warreensis, *Dalz.* ... ... „ 439
Wightianus, *Nees* ... ... „ 438
Zenkerianus, *T. Anders.* „ 439
zeylanicus, *T. Anders.* ... „ 451
sp., Hk. f. & T. iv. 427, 428, 444, 446, 451, 466, 467, 468, 469

Vol. Page
Stroemeria tetrandra, Vahl i. 172
trifoliata, Roxb. ... ... „ 172
Strombosia, *Bl.* ... ... i. 579
ceylanica, *Gard.* ... „ 579
ceylanica, Dalz. ... ... v. 235
javanica, *Bl.* ... ... i. 579
javanica, Thw. ... ... „ 579
Strongylocalyx hemisphæricus, Bl. ... ... ii. 477
Strongylodon, *Vogel* ... .. ii. 190
ruber, *Vogel* ... ... „ 191
Strophanthus, *DC.* ... ... iii. 655
brevicaudatus, *Wight* ... „ 656
caudatus, Kurz ... iii. 655, 656
dichotomus, *DC.* ... ... iii. 655
dichotomus, Wall. ... ... „ 656
Griffithii, Wight ... ... „ 655
Horsfieldianus, Miq. ... „ 655
Jackianus, *Wall.* ... ... „ 656
longicaudatus, Wight ... „ 655
pentaphyllus, Griff. ... ... „ 655
scandens, R. & S. ... ... „ 655
Wallichii, *A. DC.* ... ... „ 655
Wightianus, *Wall.* ... ... „ 656
Struthiola scandens, Wall. ... i. 582
Strychnos, *Linn.* ... .. iv. 86
acuminata, *Wall.* ... ... „ 86
acuminata, Wall. ... ... „ 89
axillaris, *Colebr.* ... ... „ 89
axillaris, Dalz. & Gibs. ... „ 87
Beddomei, *Clarke* ... ... „ 88
Benthami, *Clarke* ... ... „ 87
bicirrhosa, Lesch. ... ... „ 87
cinnamomifolia, *Thw.* ... „ 89
colubrina, *Linn.* ... ... „ 87
colubrina, Bl. ... ... „ 88
colubrina, Wall. ... iv. 88, 90
coriacea, Thw. ... ... iv. 89
Dalzellii, *Clarke* ... ... „ 87
Gautheriana, Pierre ... „ 89
grandis, Wall. ... ... „ 86
hypogyna, *Clarke* ... ... „ 86
Ignatii, Bergius ... ... „ 88
laurina, *Wall.* ... ... „ 88
laurina, Thw. ... ... „ 88
ligustrina, Bl. ... ... „ 90
lucida, Wall. ... ... „ 90
Maingayi, *Clarke* ... .. „ 88
malaccensis, *Benth.* ... „ 89
micrantha, *Thw.* ... ... „ 86
minor, Benth. ... ... „ 87
minor, Bl. ... ... „ 87
Nux-vomica, *Linn.* ... ... „ 90
ovalifolia (*ovatifolia*) Wall. „ 88
potatorum, *Linn. f.* ... „ 90
pubescens, *Clarke* ... ... „ 89
Rheedei, *Clarke* ... ... „ 87

Strychnos Vol. Page
rufa, *Clarke* ... iv. 89
septemnervis, *Clarke* ... „ 88
Tetankotta, Retz. ... „ 90
Wallichiana, *Benth.* ... „ 90
sp., Wall. ... „ 86
Sturmia bituberculata, Rchb. f. v. 696
nervosa, Rchb. f. ... vi. 182
STYLIDIEÆ ... iii. 419
Stylidium, *Sw.* ... iii. 420
Brunonis, Griff. ... „ 420
Kunthii, *Wall.* ... „ 420
roseum, Kurz ... „ 420
sinicum, Hance ... „ 420
tenellum, *Sw.* ... „ 420
uliginosum, *Sw.* ... „ 420
uliginosum, Kurz ... „ 420
Stylidium, Lour. ... ii. 743
chinense, Lour. ... „ 743
Stylocoryne attenuata, Voigt iii. 104
auriculata, Wall. ... „ 108
bispinosa, Griff. ... „ 111
breviflora, Schlecht. ... „ 106
costata, Miq. ... „ 103
densiflora, Wall. ... „ 112
dimorphophylla, Teysm. & Binn. ... „ 112
elliptica, Thw. ... „ 107
fragrans, Bl. ... „ 103
fragrans, DC. ... „ 103
laxiflora, Bl. ... „ 103
lucida, Miq. ... „ 103
macrophylla, Wall. ... „ 35
malabarica, DC. ... „ 111
monosperma, W. & A. ... „ 103
Pandaki, DC. ... „ 111
penangensis, Miq. ... „ 102
rigida, Wight ... „ 102
truncata, Wall. ... „ 94
Webera, A. Rich. ... „ 102
Webera, Kurz ... „ 105
Webera, Wall. iii. 102, 104, 105, 106
sp., Wall. ... iii 102, 113
Stylodiscus trifoliatus, Benn. v. 345
Styloglossum nervosum, Kuhl & Hassk. ... v. 854
Stylophorum, *Nutt.* ... i. 119
lactucoides, *Benth. & Hk. f.* „ 119
Stylosanthes, *Sw.* ... ii. 148
facie oxalidea, Wall. ... „ 174
mucronata, *Willd.* ... „ 148
Styphelia malayica, Spreng. iii. 477
STYRACEÆ ... iii. 572
Styrax, *Linn.* ... iii. 588
Benzoin, *Dryand.* ... „ 589
? crotonoides, *Clarke* ... „ 589
Finlaysonianum, Wall. ... „ 588
floribundum, Griff. ... „ 588

Styrax Vol. Page
grandiflorum, Griff. ... iii. 589
Hookeri, *Clarke* ... „ 589
japonicum, Sieb. & Zucc. „ 589
javanicum, Bl. ... ii. 743
odoratissimum, Champ. ... iii. 588
polyspermum, *Clarke* ... „ 590
Porterianum, Wall. ... „ 588
rugosum, *Kurz* ... „ 589
serrulatum, *Roxb.* ... „ 588
suberifolium, Hk & Arn. „ 589
virgatum, Wall. ... „ 589
sp., Gamble ... „ 589
Suæda, *Forsk.* ... v. 13
corniculata, *Hk. f.* ... „ 14
fruticosa, *Forsk.* ... „ 13
indica, Moq. ... „ 14
indica, Willd. ... „ 13
maritima, *Dumort.* ... „ 14
microsperma, *Ledeb.* ... „ 15
monoica, *Forsk.* ... „ 13
nudiflora, *Moq.* ... „ 14
nudiflora, Moq. ... „ 14
nudiflora, Thw. ... „ 13
sedifolia, Pall. ... „ 10
vermiculata, Forsk. ... „ 13
SUÆDEÆ ... v. 2
Suffrenia capensis, Harv. ... ii. 568
Sumbavia, *Baill.* ... v. 408
macrophylla, *Muell.* ... „ 408
Sunipia, *Lindl.* ... v. 772
bicolor, Lindl. ... „ 770
scariosa, *Lindl.* ... „ 772
Suptula, Jones ... iii. 591
Suregada angustifolia, Baill. v. 459
bilocularis, Roxb. ... „ 460
bilocularis, Wall ... „ 459
dicocca, Roxb. ... „ 460
glabra, Roxb. ... „ 459
glomerulata, Baill. ... „ 460
multiflora, Baill. ... „ 459
Suriana, *Linn.* ... „ 522
maritima, *Linn.* ... „ 522
Surwala robusta, Rœm. ... i. 565
Sussuela esculenta, Rumph iv. 61
Susum, *Bl.* ... vi. 391
anthelminticum, *Bl.* ... „ 391
anthelminticum, Maury ... „ 391
malayanum, *Planch.* ... „ 391
Sutera, *Roth* ... iv. 258
dissecta, Walp ... „ 258
glandulosa, *Roth* ... „ 258
serrata, Hochst. ... „ 265
Swertia, *Linn.* ... iv. 121
affinis, *Clarke* ... „ 126
alata, *Royle* ... „ 125
alternifolia, *Royle* ... „ 128
angustifolia, *Ham.* ... „ 125

Swertia Vol. Page
  Beddomei, *Clarke* ... ... iv. 127
  bimaculata, *Hk. f. & T.* iv. 123, 734
  carinthiaca, Wulf ... ... iv. 120
  centrostemma, Wall. ... ,, 130
  Chirata, *Ham.* ... ... ,, 124
  cœrulea, *Royle* ... ... ,, 129
  cordata, *Wall.* ... ... ,, 123
  corniculata, Linn. ... ... ,, 130
  corymbosa, *Wight* ... ... ,, 126
  cuneata, *Wall.* ... ... ,, 129
  decussata, *Nimmo* ... ... ,, 127
  dilatata, *Clarke* .. ... ,, 122
  elegans, Wall. ... ... ,, 125
  florida, Wall. ... ... ,, 125
  Griffithii, *Clarke* ... ... ,, 122
  Hookeri, *Clarke* ... ... ,, 127
  Hugelii, Griseb. ... ... ,, 129
  Kingii, *Hk. f.* ... ... ,, 734
  lahulensis, A. Kerner ... ,, 128
  lurida, *Royle* ... ... ,, 124
  macrosperma, *Clarke* ... ,, 123
  multicaulis, *D. Don* ... ... ,, 129
  nervosa, *Wall.* ... ... ,, 125
  paniculata, *Wall.* ... ... ,, 122
  peloria, Griff. ... ... ,, 130
  perennis, Linn. ... ... ,, 129
  petiolata, *Royle* ... iv. 128, 734
  pulchella, *Ham.* ... ... iv. 125
  purpurascens, *Wall.* ... ,, 121
  racemosa, *Wall.* ... ... ,, 124
  Rex, *Clarke* ... ... ,, 127
  rotata, Pall. ... ... , 120
  speciosa, *Wall.* ... ... ,, 128
  speciosa, D. Don ... ... ,, 128
  speciosa, G. Don ... ... , 128
  tetragona, *Clarke* ... ... ,, 122
  Thomsoni, *Clarke* ... ... ,, 129
  trichotoma, *Wall.* ... ... ,, 126
  zeylanica, *Walker* ... ... ,, 127
SWERTIEÆ ... ... iv. 94
Swietenia Chickrassia, Roxb. i. 568
  Chloroxylon, Roxb. ... ... ,, 569
  febrifuga, Roxb. ... ... ,, 567
  rubra, Wall. ... ... ,, 567
  Soymida, Dunc. ... ... ,, 567
  Sotrophola, Ham. ... ... ,, 568
  trilocularis, Roxb. ... ... ,, 568
  velutina, Wall. ... ... ,, 568
  villosa, Wall. ... ... ,, 568
SWIETENIEÆ ... ... i. 541
Swintonia, *Griff.* ... ... ii. 26
  Griffithii, *Kurz* ... ... ,, 26
  Helferi, *Hk. f.* ... ... ,, 26
  Schwenkii, *Teysm. & Binn.* ,, 26
  spicifera, *Hk. f.* ... ... ,, 27
Sycomorphe Roxburghii, Miq. v. 523
Sycomorus capensis, Miq. ... v. 535
Sycomorus Vol. Page
  gummiflua, Miq. ... ... v. 535
Sycopsis, *Oliv.* ... ... ii. 427
  Griffithiana, *Oliv.* ... ... ,, 427
Sykesia Koenigii, Arn. ... iv. 91
  thyrsiflora, Arn. ... ... ,, 91
  Walkeri, Arn. ... ... ,, 92
Syllepis polystachya, Fourn. vii. 107
Sylvœa (vide *Silvœa*) ... ... v. 397
Symphorema, *Roxb.* ... ... iv. 599
  involucratum, *Roxb.* ... ,, 599
  involucratum, Kew Distrib. ,, 599
  involucratum, Kurz ... ,, 600
  involucratum, Wall., *lapsu C.* ,, 599
  Jackianum, Kurz ... ... ,, 602
  microstylis, Bedd. ... ... ,, 600
  pentandrum, Kurz ... ... ,, 602
  polyandrum, *Wight* ... ... ,, 599
  unguiculatum, Kurz ... ,, 601
SYMPHOREMEÆ ... ... iv. 561
Symphoriæ, sp., Griff. ... iii. 14
Symphyandra stylosa, Royle iii. 438
Symphyllia malloti formis, Muell. ... ... v. 418
  silhetiana, Baill. ... ... ,, 418
Symphyoglossum hastatum, Turcz. ... ... iv. 25
Symplocinea, Griff. ... ... iii. 579
Symplocos, *Linn.* ... ... iii. 572
  acuminata, *Bedd.* ... ... ,, 583
  acuta, *Thw.* ... ... ,, 584
  adenophylla, *Wall.* ... ,, 575
  anamallayana, *Bedd* ... ,, 581
  angustata, *Clarke* ... ... ,, 585
  apicalis, *Thw.* ... ... ,, 586
  attenuata, Wall. ... ... ,, 573
  Beddomei, *Clarke* ... ... ,, 582
  bractealis, *Thw.* ... ... ,, 584
  caudata, *Wall.* ... ... ,, 577
  celastrifolia, *Griff.* ... ... ,, 575
  cerasifolia, *Wall.* ... ... ,, 580
  cordifolia, *Thw.* ... ... ,, 586
  coronata, *Thw.* ... ... ,, 587
  crassipes, *Clarke* ... ... ,, 580
  cratægoides, *Ham.* ... ... ,, 573
  cuneata, *Thw.* ... ... ,, 584
  decora, Hance ... ... ,, 579
  dryophila, *Clarke* ... ... ,, 578
  elegans, *Thw.* ... ... ,, 586
  elegans, Thw. ... ... ,, 586
  fasciculata, *Zoll.* ... ... ,, 574
  ferruginea, *Roxb.* ... ... ,, 574
  flavida, Miq. ... ... ,, 573
  floribunda, Wall. ... ... ,, 579
  foliosa, *Wight* ... ... ,, 582
  Gardneriana, *Wight* ... ,, 582
  glomerata, *King* ... ... ,, 577
  grandiflora, *Wall.* ... ... ,, 578

Symplocos Vol. Page
Hamiltoniana, Wall. ... iii. 576
hebantha, *Thw.* ... ... „ 586
Henscheli, *Benth.* ... ... „ 588
hirsuta, Thw. ... ... „ 586
hirsuta, Wight & Gardn. „ 585
hispidula, *Thw.* ... ... „ 585
Hohenackeri, *Clarke* .. „ 582
Hookeri, *Clarke* ... iii. 578, 589
Horsfieldiana, Miq. ... ... iii. 574
iteophylla, Miq. ... ... „ 575
javanica, Kurz ... ... „ 574
jucunda, *Thw.* ... ... „ 585
kurgensis, *Clarke* ... ... „ 576
lachnobotrya, Miq. ... ... „ 574
læta, *Thw.* ... ... „ 584
lancifolia, *Sieb. & Zucc.* „ 577
latiflora, *Clarke* ... ... „ 585
laurina, Wall. ... ... „ 573
leiostachya, *Kurz* ... ... „ 580
leiostachya, Kurz ... ... „ 580
leptostachya, Sieb. & Zucc. „ 577
leucantha, *Kurz* ... ... „ 579
Loha, D. Don ... ... iii. 573, 579
Loha, Miq. ... ... iii. 573
lucida, Wall. ... ... „ 575
macrocarpa, *Wight* ... „ 582
macrophylla, *Wall.* ... „ 578
Maingayi, *Benth.* ... ... „ 588
marginalis, *Thw.* ... ... „ 587
microcarpa, Benth ... ... „ 577
microphylla, *Wight* ... „ 581
minor, *Clarke* ... ... „ 586
mollis, Wall. ... . „ 574
monantha, *Wight* ... ... „ 581
nervosa, A. DC. ... ... „ 576
nervosa, Wight ... ... „ 582
nicobarica, *Clarke* ... ... „ 580
obtusa, *Wall.* ... ... „ 583
oligandra, *Bedd.* ... ... „ 574
ophirensis, *Clarke* ... ... „ 579
oxyphylla, *Wall.* ... ... „ 574
paniculata, Wall. ... ... „ 573
pauciflora, *Wight* ... ... „ 587
pedicellata, Kurz ... ... „ 574
pendula, *Wight* ... ... „ 587
pendula, Thw. ... ... „ 587
phyllocalyx, *Clarke* ... „ 575
polycarpa, *Wall.* ... ... „ 573
polystachya, Wall. ... ... „ 575
polystachya, Zoll. & Mor. „ 574
propinqua, Hance ... ... „ 576
prunifolia, Sieb. & Zucc. „ 577
pulchra, *Wight* ... ... „ 583
pyrifolia, *Wall.* ... ... „ 579
racemosa, *Roxb.* ... ... „ 576
racemosa, A. DC. ... ... „ 576
racemosa, Roxb. ... iii. 576, 579

Symplocos Vol. Page
racemosa, Wall. iii. 573, 575, 576, 579
racemosa, Wight ... ... iii. 583
ramosissima, *Wall.* .. „ 577
reticulata, Grah. ... ... „ 582
rigida, *Clarke* ... ... „ 581
rigida, Wall. ... ... iii. 576, 577
rosea, *Bedd.* ... ... iii. 583
rubiginosa, *Wall.* ... ... „ 580
rufescens, Thw. ... ... „ 584
salicifolia, Ham. ... ... „ 579
sessilis, *Clarke* ... ... „ 587
spicata, *Roxb.* ... ... „ 573
spicata, A. DC. ... ... „ 573
spicatæ affinis, Bedd. ... „ 576
Stawellii, F. Muell. ... „ 573
subcordata, Wight ... ... „ 585
sulcata, *Kurz* ... ... „ 579
Sumuntia, *Ham.* ... ... „ 578
Sumuntia, A. DC. ... ... „ 579
Swinhoeana, Hance... ... „ 577
theæfolia, *Ham.* ... ... „ 575
theæfolia, D. Don ... ... „ 576
uniflora, Bedd. ... ... „ 581
Verhuelli, Jungh. & De Vr. „ 574
versicolor, *Clarke* ... ... „ 584
xanthophylla, Jungh. & De Vr „ 574
sp., Gamble ... ... „ 575
sp., Griff. iii. 575, 576, 577, 578, 579
sp., Hk. f. & T. iii. 575, 576, 577, 578, 579, 582
Synanthera, Wall. iii. 234, 235, 248, 288, 243, 375
Synantherias, *Schott* ... ... vi. 517
sylvatica, *Schott* ... ... „ 518
Synaptea grandiflora, Kurz i. 301
odorata, Griff. ... ... „ 301
Syndesmis coarctatus, Griff. ii. 22
elegans, Wall. ... ... „ 22
tavoyana, Wall. ... ... „ 22
Syndiclis, *Hk. f.* ... ... v. 127
paradoxa, *Hk. f.* ... ... „ 127
Synedrella, *Gærtn.* ... ... iii. 308
nodiflora, *Gærtn.* ... ... „ 308
Synmeria schizochilus, Grah. vi. 142
Synnema avanum, Benth. ... iv. 405
Synæcia diversifolia, Miq. ... v. 529
falcata, Miq. ... ... „ 518
serpens, Miq. ... ... „ 518
sumatrana, Miq. ... ... „ 518
Synphillium torenioides, Griff. ... ... iv. 275
Syntherisma ciliare, Schrad. vii. 14
glabrum, Schrad. ... ... „ 17
vulgare, Schrad. ... ... „ 14
Syringa, *Linn.* ... ... iii. 604
Emodi, *Wall.* ... ... „ 605

Syringa ... Vol. Page
persica, *Linn.* ... ... iii. 604
SYRINGEÆ ... ... iii. 590
Syzyganthus multiflorus, Steud. ... ... vi. 677
Syzygium alternans, Miq. ... ii. 500
altissimum, Wall. ... ... „ 483
angkolanum, Miq. ... ... „ 498
areolatum, DC. ... ... „ 490
assimile, Thw. ... ... „ 493
avene, Miq. ... ... „ 489
balsameum, Wall. ... .. „ 499
Belluta, DC. ... ... „ 485
brachiatum, Miq. ... ... „ 496
calophyllifolium, Thw. ... „ 494
capillare, Wall. ... ... „ 478
caryophyllæum, Gærtn. ... „ 490
caryophyllifolium, DC. ... „ 499
caudatum, Wall. ... ... „ 482
cinereum, Wall. ... ... „ 496
claviflorum, Wall. ... ... „ 484
concinnum, Wall. ... ... „ 482
contractum, Wall. ... ... „ 485
cordifolium, Thw. ... ... „ 491
corticatum, Wall. ... ... „ 485
costatum, Miq. ... ... „ 498
cuneatum, Wall. ... ... „ 495
cyclophyllum, Thw. ... ... „ 494
cymosum, DC. ... ... „ 482
densiflorum, Wall. ... ... „ 484
excavatum, Wall. ... ... „ 484
expansum, Wall. ... ... „ 491
ficifolium, Wall. ... ... „ 497
filiforme, Wall. ... ... „ 478
firmum, Thw. ... ... „ 476
fruticosum, DC. ... ... „ 499
Gardneri, Thw. ... ... „ 489
grande, Walp ... ... „ 476
gratum, Wall. ... ... „ 486
Heyneanum, Wall. ... ... „ 500
inophyllum, DC. ... ... „ 481
Jambolanum, DC. ... ... „ 499
kalahiense, Korth. ... ... „ 489
lateriflorum, Royle ... ... „ 499
lineare, Wall. ... ... „ 486
lissophyllum, Thw. ... ... „ 488
longiflorum, Wall. ... ... , 484
Michelii, Lam. ... ... „ 505
micranthum, Thw. ... ... „ 483
montanum, Thw. ... ... „ 476
myrtifolium, DC. ... ... „ 483
Neesianum, Arn. ... ... „ 493
nelitricarpum, T. & B. ... „ 482
nervosum, DC. ... ... „ 498
nodosum, Miq. ... ... „ 498
oblatum, Wall. ... ... „ 492
obovatum, Wall. ... ... „ 498
occlusum, Miq. ... ... „ 498
Syzygium Vol. Page
oliganthum, Thw. ... ... ii. 494
palembanicum, Miq. ... „ 476
Panealla, Wall. ... ... „ 498
politum, Wall. ... ... „ 485
polyanthum, Thw. ... ... „ 498
pulchellum, Wall. ... ... „ 492
punctulatum, Wall. ... „ 487
pyrifolium, DC. ... ... „ 487
rameum, Wall. ... ... „ 497
revolutum, Thw. ... ... „ 492
ribesioides, Wall. ... ... „ 496
rigidum, Wall. ... ... „ 487
rotundifolium, Arn. ... „ 494
rubicundum, W. & A. ... „ 495
salicifolium, Wall. ... ... „ 495
sclerophyllum, Thw. ... „ 494
scoparium, Wall. ... ... „ 489
spathulatum, Thw. ... ... „ 495
speciosum, Wall. ... ... „ 481
suavissimum, Wall. ... ... „ 484
subdecussatum, Wall. ... „ 491
sylvestre, Thw. ... ... „ 493
tenue, Wall. ... ... „ 500
tetragonum, Kurz ... ... „ 497
vastum, Wall. ... ... „ 498
venosum, DC. ... ... „ 490
venulosum, Wall. ... ... „ 490
verecundum, Wall. ... ... „ 496
vimineum, Wall. ... ... „ 482
Wightianum, Wall. ... ... „ 485
zeylanicum, DC. ... ... „ 485
sp., Griff. ... ... „ 484

Tabernæmontana, *Linn.* ... iii. 645
alternifolia, Linn. ... ... „ 648
alternifolia, Roxb. ... ... „ 648
calycina, *Wall.* ... ... „ 649
Colignonæ, Van Heurck & Muell. ... ... „ 647
coronaria, *Br.* ... ... „ 646
corymbosa, *Roxb.* ... ... „ 646
crispa, *Roxb.* ... ... „ 648
cylindracea, Wall. ... ... „ 632
densiflora, Wall. ... ... „ 633
dichotoma, *Roxb.* ... ... „ 645
dichotoma, Gibs. ... ... „ 646
divaricata, Bl. ... ... „ 647
elastica, Spreng. ... ... „ 657
Finlaysoniana, Wall. ... „ 649
graciliflora *Wall.* ... ... „ 647
gratissima, Lindl. ... ... „ 648
Heyneana, *Wall.* ... ... „ 646
hirta, *Hk. f.* ... ... „ 646
indica, Willd. ... ... „ 649
intercedens, Van Heurck & Muell. ... ... „ 646
javanica, Miq. ... ... „ 646

Tabernæmontana Vol. Page
macrocarpa, Jack ... ... iii. 649
malaccensis, *Hk. f.* ... ... „ 649
membranifolia, *Kurz* ... „ 649
microcarpa, Wall. ... ... „ 633
monocarpa, Steud. ... . „ 649
ophiorhizoides, *Kurz* ... „ 649
parviflora, Heyne ... iii. 633, 637
parvifolia, Roxb. ... ... iii. 649
peduncularis, *Wall.* ... „ 647
persicariæfolia, Willd. ... „ 649
polyantha, Bl. ... ... „ 671
recurva, *Roxb.* ... ... „ 648
recurva, Hohen. ... ... „ 646
rostrata, *Wall.* ... ... „ 648
salicifolia, Wall. ... ... „ 637
sphærocarpa, Bl. ... ... „ 646
subcapitata, *Wall.* ... ... „ 647
? *subcapitata*, Hk. f. & T. „ 633
verticillata, Bedd. ... ... „ 634
Wallichiana, Steud. ... „ 649
Tacca, *Forst.* ... ... vi. 287
aspera, Roxb. ... ... „ 288
cristata, *Jack* ... ... „ 287
integrifolia, Ham. ... ... „ 288
integrifolia, *Ker* ... ... „ 287
lævis, *Roxb.* ... ... „ 288
pinnatifida, *Forst.* ... vi. 287, 517
pinnatifolia, Gærtn. ... ... vi. 287
Rafflesiana, Jack ... ... „ 287
TACCACEÆ ... ... vi. 286
Tæganocharis, vide *Tenagocharis* ... ... vi. 562
Tæniochlæna, *Hk. f.* ... ... ii. 54
Griffithii, *Hk. f.* ... ... „ 55
Tæniophyllum, *Bl.* ... ... vi. 76
Alwisii, *Lindl.* ... ... „ 76
Jerdonianum, Wight ... „ 60
scaberulum, *Hk. f.* ... ... „ 77
serrula, *Hk. f.* .. .. „ 77
Tainia, *Bl.* ... ... v. 819
angustifolia, *Benth.* ... ... „ 819
barbata, Lindl. ... ... „ 803
bicornis, *Benth.* ... ... „ 820
cordata, *Hk. f.* ... ... vi. 193
hastata, *Hk. f.* ... v. 821, vi. 193
hologlossa, *Benth.* ... ... v. 822
khasiana, *Hk. f.* v. 821, vi. 193
latifolia, *Benth.* v. 820, vi. 14, 192
latilingua, *Hk. f.* v. 822, vi. 193
maculata, *Hk. f.* ... v. 821, 910
vi. 190, 193
Maingayi, *Hk. f.* v. 822, vi. 193
minor, *Hk. f.* ... v. 821, vi. 193
penangiana, *Hk. f.* v. 820, vi. 192
promensis, *Hk. f.* ... ... v. 820
speciosa, *Bl.* ... ... „ 822
viridi-fusca, *Benth.* ... „ 820

Vol. Page
Talauma, *Juss.* ... ... i. 40
Hodgsoni, *Hk. f. & T.* ... „ 40
lanigera, *Hk. f. & T.* ... „ 40
mutabilis, *Bl.* ... ... „ 40
Rabaniana, *Hk. f. & T.* ... „ 40
Taliera bengalensis, Spreng. vi. 429
Tali, Mart. ... . „ 429
Talinum, *Adans.* ... ... i. 247
cuneifolium, *Willd.* ... „ 247
decumbens, Willd. ... ... ii. 661
indicum, W. & A. ... ... i. 247
Tamarindus, *Linn.* ... ... ii. 273
indica, *Linn.* ... ... „ 273
occidentalis, Gaertn. ... „ 273
officinalis, Hook. ... ... „ 273
TAMARISCINEÆ ... ... i. 248
Tamarix, *Linn.* ... ... i. 248
articulata, *Vahl* ... ... „ 249
articulata, Wall. ... i. 248, 249
dioica, *Roxb.* ... ... i. 249
ericoides, *Rottl.* ... ... „ 249
epacroides, Sm. ... ... „ 248
gallica, *Linn.* ... ... „ 248
gallica, Wight ... ... „ 248
germanica, Linn. ... ... „ 250
indica, Kœn. ... ... „ 248
indica, Willd. ... ... „ 248
mucronata, Sm. ... ... „ 249
orientalis, Forsk. ... ... „ 249
Pallasii, Desv. ... ... „ 248
passerinoides, Del. ... ... „ 249
Pharas, Ham. ... ... „ 249
ramosissima, Ledeb. ... „ 248
salina, *Dyer* ... ... „ 248
stricta, *Boiss.* ... ... „ 249
tenacissima, Ham. ... ... „ 249
usneoides, E. Mey. ... ... „ 249
Tanacetum, *Linn.* ... ... iii. 318
artemisioides, *Schultz.* ... „ 318
Falconeri, *Hk. f.* ... ... „ 320
fruticulosum, *Ledeb.* ... „ 318
fruticulosum, Clarke ... „ 318
gossypinum, *Hk. f. & T.* ... „ 321
gracile, *Hk. f. & T.* ... ... „ 318
longifolium, *Wall.* ... ... „ 320
nanum, *Clarke* ... ... „ 320
nubigenum, *Wall.* ... ... „ 318
purpureum, D. Don ... „ 246
pyrethroides, Schultz. ... „ 315
robustum, *Hk. f. & T.* ... „ 320
Senecionis, *Gay* ... ... „ 319
tenuifolium, *Jacquem.* ... „ 319
tibeticum, *Hk. f. & T.* ... „ 319
tomentosum, DC. ... ... „ 319
viscosum, Wall. ... ... „ 246
Tanghinia dichotoma, G. Don iii. 645
lactaria, G. Don ... ... „ 638

Tanghinia Vol. Page
laurifolia, G. Don ... ... iii. 638
Odollam, G. Don ... ... „ 638
Taphrospermum altaicum, C. A. Mey. ... ... i. 145
Tapinocarpus Dalzellii, Schott vi. 513
indicus, Dalz. ... ... „ 513
Tapiria, *Juss.* ... ... ii. 28
hirsuta, *Hk. f.* ... ... „ 28
Taraxacum, *Hall.* ... ... iii. 401
eriopodum, DC. ... ... „ 401
officinale, *Wigg.* ... ... „ 401
Wallichii, DC. ... ... „ 401
Wattii, *Hk. f.* ... ... „ 402
Tarrietia, *Bl.* ... ... i. 362
simplicifolia, *Mast.* ... „ 362
Tauscheria, *Fisch.* ... ... i. 163
desertorum, Ledeb. ... ... „ 164
lasiocarpa, *DC.* ... ... „ 164
Taverniera, *DC.* ... ... ii. 140
cuneifolia, Arn. ... ... „ 140
ephedroides, Jaub. & Sp. „ 140
gonoclada, Jaub. & Sp. .. „ 140
Nummularia, *DC.* ... ... „ 140
spartea, DC. ... ... „ 140
Taxaceæ, Griff. ... ... v. 654
TAXEÆ ... ... v. 644
TAXODIEÆ ... ... v. 644
Taxotrophis, *Bl.* ... ... v. 488
Roxburghii, Bl. ... ... „ 488
zeylanica, *Thw.* ... ... „ 488
Taxus, *Tour.* ... . v. 648
baccata, *Linn.* ... ... „ 648
contorta, Griff. ... ... „ 648
? *Lambertiana*, Wall. ... „ 655
nepalensis, Jacq. ... ... „ 648
nucifera, Wall. ... ... „ 648
orientalis, Bertol. ... ... „ 648
virgata, Wall. ... ... „ 648
Wallichiana, Zucc. .. ... „ 648
Tecoma, *Juss.* ... ... iv. 378
? *glauca*, DC. ... ... „ 378
suaveolens, G. Don ... ... „ 383
undulata, *G. Don* ... ... „ 378
xylocarpa, G. Don ... ... „ 384
Tecomella undulata, Seem. ... iv. 378
Tectona, *Linn. f.* ... . iv. 570
grandis, *Linn. f.* ... ... „ 570
Hamiltoniana, *Wall.* ... „ 571
Teinostachyum, *Munro* ... vii. 410
attenuatum, *Munro*... ... „ 410
Dullooa, *Gamble* ... ... „ 411
Griffithii, *Munro* ... ... „ 410
Helferi, *Gamble* ... ... „ 411
? *maculatum*, Trim. ... ... „ 419
schizostachyoides, Kurz ... „ 393
Wightii, *Bedd.* ... ... „ 410
Telmatophace gibba, Schleid. vi. 557

Vol. Page
Telogyne indica, Baill. ... v. 398
Tenagocharis (lapsu *Tæganocharis*) *cordofana*, Hochst. ... ... vi. 562
Tephrosia, *Pers.* ... ... ii. 110
amœna, Hort. Calc. ... ... „ 113
anthylloides, Hochst. ... „ 114
argentea, Pers. ... ... „ 113
argentea, Wight ... ... „ 114
calophylla, *Bedd.* ... ... „ 111
candida, *DC.* ... ... „ 111
coccinea, Wall. ... ... „ 112
Colutea, Wight ... ... „ 114
diffusa, W. & A. ... ... „ 113
Ehrenbergiana, Schweinf. „ 114
elegans, Wall. ... ... „ 112
fusca, *W. & A.* ... ... „ 114
galegoides, Grah. ... ... „ 112
Grahami, Wall. ... ... „ 112
Heyneana, Wall. ... ... „ 111
Hookeriana, *W. & A.* ... „ 113
hypargyræa, DC. ... ... „ 111
icthyneca, Bertol. ... ... „ 110
incana, Grah. ... ... „ 113
indigofera, Bertol. ... ... „ 113
intermedia, Grah. ... ... „ 112
lanceæfolia, Link ... ... „ 113
lanceolata, Grah. ... ... „ 113
leptostachya, DC. ... ... „ 112
lobata, Grah. ... ... „ 112
maxima, Pers. ... ... „ 113
Mitchellii, Grah. ... ... „ 113
nervosa, Pers. ... ... „ 111
parviflora, Wight ... ... „ 113
pauciflora, *Grah.* .. ... „ 114
pentaphylla, Grah. ... ... „ 112
Petersiana, Klotz. ... ... „ 110
pulcherrima, Wight ... ... „ 112
pulchra, Coleb. ... ... „ 105
pumila, Pers. ... ... „ 113
purpurea, *Pers.* ... ... „ 112
racemosa, W. & A. ... ... „ 105
senticosa, *Pers.* ... ... „ 112
sericea, DC. ... ... „ 110
spinosa, *Pers.* ... ... „ 112
stricta, Grah. ... ... „ 112
suberosa, DC. ... ... „ 110
Taylorii, Grah. ... ... „ 112
tenuis, *Wall.* ... ... „ 111
tinctoria, *Pers.* ... ... „ 111
tinctoria, Grah. ... ... „ 112
timoriensis, DC. ... ... „ 113
villosa, *Pers.* ... ... „ 113
Wallichii, Grah. ... ... „ 112
Teramnus, *Sw.* ... ... ii. 184
flexilis, *Benth.* ... ... „ 185
labialis, *Spreng.* ... ... „ 184

Teramnus Vol. Page
mollis, Benth. ... ... ii. 184
Terebinthacea, Wall. ii. 11,24,36,37,40
Terminalia, *Linn.* ... ... ii. 443
alata, Roth... ... ... „ 447
angustifolia, Roxb. ... ... „ 449
angustifolia, Jacq. ... ... „ 444
angustifolia, Rumph. ... vi. 327
Arjuna, *W. & A.* ... ... ii. 447
Aruta. Ham. ... . „ 446
attenuata, Edgew. (see *Errata*).
Badamia, Tulasne ... ... „ 444
belerica, *Roxb.* (see *Errata*) „ 445
belerica, Bedd. ... ... „ 445
belerica, W. & A. ... ... „ 445
bengalensis, *Roxb.* ... ... „ 449
Benzoin, Linn. ... ... „ 444
Berryi, W. & A. ... ... „ 447
bialata, *Kurz* ... ... „ 449
Catappa, *Linn.* ... ... „ 444
Catappa, Tulasne ... ... „ 444
Chebula, *Retz.* ... ... ii. 446, 447
citrina, *Roxb.* ... ... ii. 446
coriacea, W. & A. ... ... „ 448
crenulata, Kurz ... ... „ 448
crenulata, Roth ... ... „ 448
eglandulosa, Roxb. ... ... „ 445
fœtidissima, *Griff.* ... ... „ 445
gangetica, Roxb. ... ... „ 446
Gella, Dalz. ... ... „ 445
glabra, Thw. ... ... „ 448
glabra, W. & A. ... ... „ 447
intermedia, Spreng. ... „ 444
javanica, Miq. ... ... „ 448
lancifolia, Griff. ... ... „ 454
microcarpa, Dcne. ... ... „ 445
moluccana, Lamk. ... ... „ 444
moluccana, Miq. ... ... „ 445
moluccana, Roxb. ... ... „ 445
moluccana, Wall. ... ... „ 449
moluccana, Willd. ... ... „ 445
monaptera, Roth ... ... „ 448
myriocarpa, *Heurck & Muell.* ... ... „ 448
Myrobalana, Roth ... ... „ 444
nitens, Presl ... ... „ 445
ovalifolia, Rottl. ... ... „ 447
ovata, Herb. Rottl. ... ... „ 447
paniculata, *Roth* i. 419, ii. 448
parviflora, Thw. ... ... ii. 446
procera, *Roxb.* ... ... „ 444
punctata, Roth ... ... „ 445
pyrifolia, *Kurz* ... ... „ 448
reticulata, Roth ... ... „ 446
subcordata, Willd. ... ... „ 444
tomentella, Kurz ... ... „ 446
tomentosa, *Bedd.* ... ... „ 447

Terminalia Vol. Page
tomentosa, W. & A. ... ... ii. 447
travancorensis, W. & A. ... „ 449
trioptera, Heyne ... ... „ 448
zeylanica, Heurck & Muell. „ 446
sp., Kurz ... ... „ 444
Terniola, *Tul.* ... ... v. 62
ceylanica, Wight (*vide* Tulasnea) ... ... „ 62
foliosa, *Wedd.* ... ... „ 63
Lawii, *Wedd.* ... ... „ 63
longipes, *Tul.* ... ... „ 63
pedunculosa, *Wedd.* ... „ 63
pulchella, *Tul.* ... ... „ 62
ramosissima, *Wedd.* ... „ 63
zeylanica, *Tul.* ... ... „ 62
Ternstrœmia, *Linn.* ... ... i. 280
aneura, Miq. ... ... „ 281
bilocularis, Roxb. ... ... „ 287
? *coriacea*, Wall. ... ... „ 282
crenulata, Wall. ... ... „ 283
crenulata, Wight ... ... „ 283
cuneifolia, Poepp. ... ... „ 281
? *dumosa*, Wall. ... ... „ 282
emarginata, *Chois.* ... .. „ 281
? *integerrima*, Wall. ... i. 282, 283
japonica, *Thunb.* ... ... i. 280
? *khasyana*, Chois. ... ... „ 281
Lushia, Ham. ... ... „ 284
macrocarpa, Scheff. ... ... „ 281
? *macrophylla*, Wall. ... „ 290
penangiana, *Chois.* ... ... „ 281
pentapetala, Jack ... ... „ 287
racemosa, D. Don ... ... „ 286
? *reticulata*, Wall. ... ... „ 282
? *sericea*, Wall. ... ... „ 283
serrata, Roxb. ... ... „ 287
trilocularis, Roxb. ... ... „ 287
Wightii, Chois. ... ... „ 281
TERNSTRŒMIACEÆ ... ... i. 279
TERNSTRŒMIEÆ ... ... i. 279
Terpnophyllum zeylanicum, Thw. ... ... i. 268
Tetra viridiflora, Roxb. ... vi. 265
Tetracera, *Linn.* ... ... i. 31
Assa, *DC.* ... ... „ 31
Euryandra, *Vahl* ... ... „ 32
lævis, *Vahl* ... ... „ 31
lucida, Wall. ... ... „ 32
macrophylla, *Wall.* ... ... „ 32
Rheedii, DC. ... ... „ 31
sarmentosa, Willd. ... ... „ 31
sericea, Bl. ... ... „ 31
trigyna, Roxb. ... ... „ 31
Tetracrypta cinnamomoides, Gardn. & Champ. ... ii. 442
Tetractinostigma microcalyx, Hassk. ... ... v. 346

Vol. Page
Tetractis, vide *Tetraotis* ... iii. 304
Tetractomia, *Hk. f.* ... ... i. 490
Beccarii, Hk. f., lapsu H. ,, 491
majus, *Hk. f.* ... ... ,, 491
Roxburghii, *Hk. f.* ... ... ,, 491
Tetradenia, Nees ... ... v. 178
ceylanica, Nees ... ... ,, 178
consimilis, Nees ... ... ,, 179
foliosa, Nees ... ... ,, 178
furfuracea, Nees ... ... ,, 178
lanuginosa, Nees ... ... ,, 178
obovata, Nees ... ... ,, 153
umbrosa, Nees ... ... ,, 179
Tetradium trichotomum, Lour. i. 490
Tetragastris ossea, Gærtn. v. 423
Tetrameles, R. Br. ... ... ii. 657
Grahamiana, Wight ... ,, 657
nudiflora, *R. Br.* ... ... ,, 657
rufinervis, Miq. ... ... ,, 657
Tetramerista, *Miq.* ... ... i. 526
glabra, *Miq.* ... ... ,, 526
Tetramorphæa Belangeriana, DC. ... ... iii. 385
Bruguiseriana, DC. ... ... ,, 385
Tetrandra glabra, Miq. ... iv. 147
Wallichii, Miq. ... ... ,, 147
Zollingeri, Miq. ... ... ,, 147
Tetranthera accedens, Bl. ... v. 172
albicans, Kurz ... ... ,, 171
alnoides, Miq. ... ... ,, 163
amara, Nees ... ... ,, 163
angusta, Wall. ... ... ,, 163
angustifolia, Gamble ... ,, 168
angustifolia, Wall. ... v. 152, 169
apetala, Dalz. & Gibs. ... v. 157
apetala, Roxb. ... ... ,, 158
apetala, Wall. ... ... ,, 158
attenuata, Nees ... ... ,, 167
attenuata, Wall. ... v. 159, 167
Baula, Ham. ... ... v. 174
bifaria, Wall. ... ... ,, 184
caduca, Ham. ... ... ,, 152
calophylla, Kurz ... ... ,, 165
camphoracea, Wall. ... ... ,, 135
capitata, Roxb. ... ... ,, 158
capitulata, Miq. ... ... ,, 163
caudata, Wall. ... ... ,, 185
celastroides, Miq. ... . ,, 158
chartacea, Meissn. ... ... ,, 181
chartacea, ? Wall. ... v. 161, 170
chrysantha, Bl. ... ... v. 159
citrata, Nees ... ... ,, 155
citrifolia, Spreng. ... ... ,, 158
cordata, Jack ... ... ,, 177
cordifolia, Meissn. ... ... ,, 177
coriacea, Heyne ... ... ,, 166
Cuipala, D. Don ... ... ,, 178
Tetranthera Vol. Page
diversifolia, Bl. ... . v. 172
? *Doshia*, D. Don ... ... ,, 168
elliptica, Nees ... ... ,, 171
elongata, Wall. ... ... ,, 165
fagifolia, Wall. ... . ,, 122
firma, Bl. ... ... ,, 162
foliosa, Wall. ... ... ,, 178
fruticosa, Ham. ... ... ,, 163
fruticosa, Nees ... ... ,, 163
fulva, Bl. ... ... ,, 160
furfuracea, Wall. ... ... ,, 178
Gardneri, Thw. ... ... ,, 176
gemelliflora, Miq. ... ... ,, 162
geminata, Nees ... ... ,, 158
glaberrima, Thw. ... ... ,, 173
glabraria, Nees ... ... ,, 158
? *glabrata*, Wall. ... ... ,, 174
glauca, Wall. ... ... ,, 167
glaucescens, Wall. ... ... ,, 135
grandiflora, Wall. ... ... ,, 181
grandis, Meissn. ... ... ,, 162
grandis, Wall. ... ... ,, 162
Griffithii, Meissn. ... ... ,, 163
hexantha, Sieb. ... ... ,, 163
Hookeriana, Meissn. ... ,, 176
iteodaphne, Nees ... ... ,, 174
iteodaphne, Thw. ... .. ,, 173
japonica, Wight ... ... ,, 157
khasiana, Meissn. ... ... ,, 164
læta, Nees ... ... ,, 169
læta, ? Wall. ... ... ,, 170
lanceæfolia, Grah. ... ... ,, 176
lanceæfolia, Roxb. ... v. 167, 176
lancifolia, Roxb. ... ... v. 159
lanuginosa, Wall ... ... ,, 178
laurifolia, Bl. ... ... ,, 158
laurifolia, Ham. ... ... ,, 168
laurifolia, ? Jacq. ... ... ,, 158
laurifolia, Nees ... ... ,, 158
laurifolia, Roxb. ... v. 158, 167
? *laurifolia*, Wall. ... ... v. 158
ligustrina, Nees ... ... ,, 158
ligustrina, Thw. ... ... ,, 158
litoralis, Bl. ... ... ,, 158
longifolia, Nees ... ... ,, 167
lucida, Bl. ... ... ,, 172
macrophylla, Wall. ... ... ,, 163
martabanica, Kurz ... ... ,, 164
micrantha, Meissn. ... ... ,, 166
monopetala, Roxb. ... ... ,, 162
multiflora, Bl. ... ... ,, 158
multiflora, Zoll. ... ... ,, 162
myristicæfolia, Wall. ... ,, 172
Neesiana, Wall. ... ... ,, 186
nemoralis, Thw. ... ... ,, 167
nervosa, Meissn. ... ... ,, 173
nigricans, Meissn. ... ... ,, 171

Tetranthera Vol. Page
nitida, Roxb. ... v. 174
nuculanea, Kurz ... ,, 166
oblonga, Nees ... ,, 168
obovata, Wall. ... ,, 153
? *ochrascens*, Miq. ... ,, 180
oleoides, Meissn. ... ,, 175
oxyphylla, Wall. ... ,, 183
pallens, D. Don ... ,, 179
Panamanja, Nees ... ,, 175
Panamanja, Ham. ... ,, 175
Perrottetii, Bl ... ,, 177
platyphylla, Nees ... ,, 158
polyantha, Wall. ... ,, 155
polycephala, Wall. ... ,, 158
prunifolia, Wall. ... ,, 186
pulcherrima, Wall. ... v. 178, 179
pusilla, Bl. ... v. 159
? *racemoso-umbellata*, Bl. ,, 158
rangoonensis, Meissn. ... ,, 161
reticulata, Ham. ... ,, 183
Roxburghii, Bl. ... ,, 158
Roxburghii, Hassk. ... ,, 180
Roxburghii, Nees ... ,, 158
salicifolia, Hk. f. & T. ... ,, 168
salicifolia, Roxb. ... ,, 167
salicifolia, Wall. ... ,, 168
saligna, Hk. f. & T. ... ,, 168
saligna, Nees ... ,, 169
? *semecarpifolia*, Wall. v. 163, 165
sericea, Meissn. ... v. 156
sericea, Wall. ... ,, 156
sessiliflora, Meissn. ... ,, 172
sikkimensis, Meissn. v. 156, 165
tersa, Spreng. ... v. 158
Thomsonii, Meissn. ... ,, 170
tomentosa, Nees ... ,, 158
tomentosa, Roxb. ... ,, 157
tuberculata, Miq. (Lepidadenia) ... ,, 172
umbrosa, Nees ... ,, 179
umbrosa, Wall. ... ,, 179
venulosa, Meissn. ... v. 113, 161
verticillata, Ham. ... v. 163
Walkeri, Meissn. ... ,, 174
Wightiana, Bedd. ... ,, 177
Wightiana, Hk. f. & T. ... ,, 164
sp., Griff. ... ,, 184
sp., Hk. f. & T. ... ,, 156
Tetraotis paludosa, Bl., lapsu *Tetractis* ... iii. 304
Tetrapeltis fragrans, Wall. ... v. 844
Tetraphyllum, *Griff.* ... v. 363
bengalense, *Clarke* ... ,, 363
sp., Griff. ... ,, 363
Tetrapilis brachiatus, Lour. iii. 612
Tetrapogon tetrastachys, Hack. vii. 292
triangularis, Hochst. ... ,, 291
Tetrapogon Vol. Page
villosus, Desf. ... vii. 291
Teucrium, *Linn.* ... iv. 700
elevatum, Benth. ... ,, 700
Fortunei, Benth. ... ,, 701
hispidum, Wall. ... ,, 703
laxum, *D. Don* ... ,, 701
macrostachyum, Wall. ... ,, 699
palmatum, *Benth.* ... ,, 702
paniculatum, Hb. Madr. ... ,, 700
quadrifarium, *Ham.* ... ,, 701
quadrifarium, Hb. Wight ,, 701
Royleanum, *Wall.* ... ,, 700
Scordium, *Linn.* ... ,, 702
secundum, Heyne ... ,, 672
stoloniferum, *Roxb.* ... ,, 700
tomentosum, *Heyne* ... ,, 700
tomentosum, Wight ... ,, 701
viscidum, Bl. ... ,, 700
Wallichianum, Benth. ... ,, 673
Wightii, *Hk. f.* ... ,, 701
sp., Benth. ... ,, 701
Teysmannia, *Rchb. f.* ... vi. 483
altifrons, *Rchb. f. & Zoll.* ,, 483
Teysmannia, Miq. ... iii. 652
Hookeriana, Miq. ... ,, 652
laxifolia, Miq. ... ,, 652
Thalassia ciliata, Kœn. ... vi. 570
Hemprichii, Asch. ... ,, 570
stipulacea, Kœn. ... v. 664
? *stipulacea*, Miq. ... ,, 663
THALASSIEÆ ... v. 659
Thalia cannæformis, Willd. ... vi. 258
Thalictrum, *Linn.* ... i. 10
acaule, Camb. ... ,, 12
alpinum, *Linn.* ... ,, 12
bracteatum, Roxb. ... ,, 2
Chelidonii, *DC.* ... ,, 11
Chelidonii, Hk. f. & T. ... ,, 11
cultratum, *Wall.* ... ,, 11
cysticarpum, Wall. ... ,, 11
Dalzelli, *Hook.* ... ,, 13
elegans, *Wall.* ... ,, 10
fœtidum, Linn. ... ,, 14
foliolosum, *DC.* ... ,, 14
glyphocarpum, W. & A. ... ,, 14
javanicum, *Bl.* ... ,, 13
kemense, Fries ... ,, 14
macrostigma, Edgew. ... ,, 11
majus, Jacq. ... ,, 14
marginatum, Royle ... ,, 12
Maxwellii, Royle ... ,, 14
microphyllum, Royle ... ,, 12
minus, *Linn.* ... ,, 14
minus, Boiss. ... ,, 14
neurocarpum, Royle ... ,, 11
pauciflorum, *Royle* ... ,, 11
pedunculatum, *Edgew.* ... ,, 12

Vol. Page

- Thalictrum
  - platycarpum, *Hk. f. & T.* i. 11
  - punduanum, *Wall.* ,, 13
  - *radiatum*, Royle ,, 13
  - reniforme, *Wall.* ,, 11
  - rostellatum, *Hk. f. & T.* ,, 12
  - rotundifolium, *DC.* ,, 13
  - rutæfolium, *Hk. f. & T.* ,, 12
  - saniculæforme, *DC.* ,, 13
  - *secundum*, Edgew. ,, 11
  - *vaginatum*, Royle ,, 14
  - virgatum, *Hk. f. & T.* ,, 12
- *Thamnocalamus Falconeri*, Hk. f. vii. 383
  - *spathiflorus*, Munro ,, 382
- ? *Thaspium foliosum*, Royle ii. 689
- *Thea assamica*, Chois. i. 290
  - *assamica*, Mast. ,, 292
  - *chinensis*, Linn. ,, 292
  - *viridis*, Chois. ,, 290
- Thecostele, *Rchb. f.* vi. 19
  - *alata*, Par. & Rchb. f. ,, 19
  - Maingayi, *Hk. f.* ,, 20
  - quinquefida, *Hk. f.* ,, 20
  - Zollingeri, *Rchb. f.* ,, 19
- *Theka*, Juss. iv. 571
  - *ternifolia*, Ham. ,, 571
- *Thela alba*, Lour. iii. 480
  - *coccinea*, Lour. ,, 481
- Thelasis, *Bl.* vi. 85
  - bifolia, *Hk. f.* ,, 86
  - ? capitata, *Bl.* ,, 86
  - *carinata*, Bl. vi. 87, 88
  - carinata, *Rchb. f.* vi. 88
  - decurva, *Hk. f.* ,, 87
  - elata, *Hk. f.* ,, 87
  - *elegans*, Bl. v. 811
  - elongata, *Bl.* vi. 86
  - khasiana, *Hk. f.* ,, 87
  - longifolia, *Hk. f.* ,, 87
  - pygmæa, *Lindl.* ,, 86
  - *pygmæa*, Lindl. ,, 87
- Thelepogon, *Roth* vii. 148
  - elegans, *Roth* ,, 148
  - *elegans*, Roth ,, 144
  - *sanguineus*, Spreng. ,, 167
- *Themeda*, Forsk. vii. 210
  - *anathera*, Hack. ,, 215
  - *arguens*, Hack. ,, 211
  - *ciliata*, Hack. ,, 213
  - *Cymbaria*, Hack. ,, 215
  - *Forskahlii*, Hack. ,, 212
  - *gigantea*, Hack. ,, 216
  - *Helferi*, Hack. ,, 214
  - *polygama*, Gmel. ,, 212
  - *tremula*, Hack. ,, 214
  - *triandra*, Forsk. ,, 212
- THEOPHRASTEÆ iii. 507

Vol. Page

- Theriophonum, *Bl.* vi. 512
  - crenatum, *Bl.* ,, 512
  - Dalzellii, *Schott* ,, 513
  - infaustum, *N. E. Br.* ,, 513
  - *Kleinii*, Schott ,, 512
  - Wightii, *Schott* ,, 512
  - *Wightii*, Engl. ,, 513
  - zeylanicum, *N. E. Br.* ,, 513
- Thermopsis, *R. Br.* ii. 62
  - barbata, *Royle* ,, 62
  - inflata, *Camb.* ,, 63
  - *laburnifolia*, D. Don ,, 62
  - *nepaulensis*, DC. ,, 62
- Theropogon, *Maxim.* vi. 324
  - pallidus, *Maxim.* vi. 270, 324
- THESIEÆ v. 229
- Thesium, *Linn.* v. 229
  - *alatavicum*, Kar. & Kir. ,, 230
  - himalense, *Royle* ,, 229
  - *multicaule*, Hk. f. & T. ,, 229
  - *multicaule*, Ledeb. ,, 230
  - *nilagiricum*, Miq. ,, 230
  - Wightianum, *Wall.* ,, 230
- Thespesia, *Corr.* i. 345
  - Lampas, *Dalz & Gibs.* ,, 345
  - populnea, *Corr.* ,, 345
- Thespis, *DC.* iii. 259
  - divaricata, *DC.* ,, 259
  - *erecta*, DC. ,, 259
- *Thibaudia acuminata*, Wall. iii. 455
  - *auriculata*, Griff. ,, 444
  - *camelifolia*, Griff. ,, 454
  - *glabra*, Griff. ,, 444
  - *gualtheriæfolia*, Griff. ,, 453
  - *loranthiflora*, Wall. ,, 446
  - *macrantha*, Hook. ,, 446
  - *myrtifolia*, Griff. ,, 449
  - *obliqua*, Griff. ,, 443
  - *pulcherrima*, Hook. ,, 446
  - *retusa*, Griff. ,, 451
  - *revoluta*, Griff. ,, 453
  - *serrata*, Wall. ,, 452
  - *setigera*, Wall. ,, 443
  - *Sprengelii*, Wall. ,, 453
  - *variegata*, Royle ,, 443
  - *variegata*, Wall. ,, 446
  - *verticillata*, Wall. ,, 443
  - *sp.*, Griff. iii 453, 460
- *Thibaudiacea*, Griff. iii. 453
- THIBAUDIEÆ iii. 442
- *Thisbe*, Falc. vi. 129
- Thismia, *Griff.* v. 666
  - Brunoniana, *Griff.* ,, 666
  - *Brunoniana*, Miers ,, 666
  - Gardneriana, *Hk. f.* ,, 666
- Thladiantha, *Bunge* ii. 630
  - *calcarata*, Clarke (see *Errata*).

Thladiantha Vol. Page
dubia, *Bunge* (see *Errata*) ii. 631
Hookeri, *Clarke* „ 631
Thlaspi, *Linn.* i. 161
alpestre, *Linn.* „ 162
arvense, *Linn.* „ 162
cardiocarpum, *Hk. f. & T.* „ 162
cochleariforme, DC. „ 162
cochlearioides, *Hk. f. & T.* „ 162
Griffithianum, Boiss. „ 162
Kotschyanum, Boiss. „ 162
THLASPIDEÆ i. 130
Thoa edulis, Willd. v. 643
Thomsonia, *Wall.* vi. 518
Hookeri, Engl. „ 518
nepalensis, *Wall.* „ 518
Thoracostachyum, *Kurz* vi. 680
bancanum, *Kurz* „ 680
hypolytroides, *Clarke* „ 680
Thottea, *Rottb* v. 74
dependens, *Klotz.* „ 74
grandiflora, *Rottb.* „ 74
tricornis, *Maingay* „ 74
Thouinia nutans, L. iii. 608
Thrixspermum amplexicaule, Rchb. f. vi. 40
Arachnites, Rchb. f. „ 41
Freemani, Rchb. f. „ 42
Hystrix, Rchb. f. „ 39
lilacinum, Rchb. f. „ 40
luniferum, Rchb. f. „ 37
teres, Rchb. f. „ 34
usneoides, Rchb. f. „ 37
Thuarea, *Pers.* vii. 91
involuta, Br. „ 91
latifolia, Br. „ 91
media, Br. „ 91
sarmentosa, *Pers.* „ 91
Thuja orientalis, Linn. v. 644
pendula, Lamb. „ 646
Thunbergia, *Linn. f.* iv. 390
alata, *Bojer* „ 391
angustifolia, Ham. „ 390
arnhemica, F. Muell. „ 390
coccinea, *Wall.* „ 393
cordifolia, Nees „ 392
fragrans, *Roxb* „ 390
fragrans, Bot. Mag. „ 391
fragrans, Wall. „ 391
grandiflora, *Roxb.* „ 392
grandiflora, Wall. „ 392
Harrisi, Hook. „ 392
Hawtayneana, *Wall.* „ 391
Hawtaynii, T. Ander „ 391
heterophylla, Wall. „ 391
javanica, Gærtn. f. „ 390
lævis, Nees „ 391
laurifolia, *Lindl.* „ 392
Thunbergia Vol. Page
longiflora, Benth. iv. 391
lutea, *T. Anders.* „ 392
mysorensis, *T. Anders.* „ 393
pendula, Hassk. „ 393
Roxburghia, Nees „ 390
scandens, Pers. „ 390
subsagittata, Blanco „ 390
tomentosa, *Wall.* „ 391
volubilis, Pers. „ 390
Wightiana, *T. Anders.* „ 393
THUNBERGIEÆ iv. 388
Thunia alba, Rchb. f. v. 818
Bensoniæ, Hk. f. „ 818
Marshalliana, Rchb. f., lapsu *Phajus* „ 818
pulchra, Rchb. f. „ 818
Thuya aphylla, Linn. i. 249
Thylacospermum, *Fenzl* i. 243
rupifragrum, *Schrenck* „ 243
Thymelæa, *Endl.* v. 194
arvensis, *Lamk.* „ 194
THYMELÆACEÆ v. 192
Thymus, *Linn.* iv. 649
biflorus, Ham. „ 650
indicus, Burm. „ 610
linearis, Benth. „ 649
nepetoides, D. Don „ 661
origanifolius, D. Don „ 651
piperitus, D. Don „ 651
repens, D. Don „ 651
Serpyllum, *Linn.* „ 649
Thyridostachyum læve, Nees vii. 158
Thyrsacanthus indicus, Nees iv. 497
Thyrsacanthus (error for Thyrsostachys) vii. 9, 421
Thyrsostachys, *Gamble* vii. 397, 421
Oliveri, *Gamble* vii. 397
siamensis, *Gamble* „ 397
Thysanachne scoparia, Presl vii. 73
Thysanolæna, *Nees* vii. 61
acarifera, Arn. & Nees „ 61
Agrostis, *Nees* vii. 61, 258
maxima, Kuntze vii. 61
Tiarella, *Linn.* ii. 399
polyphylla, *D. Don* „ 399
Tiaridium anisophyllum, G. Don iv. 152
indicum, Lehm. „ 152
Tiglium Cumingii, Klotz. v. 391
hispidum, Klotz. „ 388
officinale, Klotz. „ 393
punctulatum, Klotz „ 392
TILIACEÆ i. 379, v. 200
Tiliacora, *Colebr.* i. 99
abnormalis, Miers „ 99
acuminata, Miers „ 99
cuspidiformis, Miers „ 99

Tiliacora Vol. Page
fraternaria, Miers ... ... i. 99
racemosa, *Colebr.* ... ... „ 99
TILIEÆ ... ... i. 380
Tillæa, *Linn.* ... ... ii. 412
pentandra, *Royle* ... ... „ 412
pharnaceoides, *Hochst.* ... „ 412
trichopoda, Fenzl ... ... „ 412
Timæosia cerastioides, Klotz.
lapsu *rupestris* ... ... i. 217
Timonius, *Rumph* ... ... iii. 126
? *acuminatus*, Wall. ... ... „ 99
Finlaysonianus, *Hk. f.* ... „ 127
flavescens, Baker ... ... „ 127
Jambosella, *Thw.* ... ... „ 127
Rumphii, *DC.* ... ... „ 127
sp., Wall. ... ... „ 127
Tinæa elegans, Garzia ... ... vii. 307
Tinantia lineolata, Hassk. ... vi. 377
Tinomiscium, *Miers* ... ... i. 97
javanicum, Miers ... ... „ 97
petiolare, *Miers* ... ... „ 97
Tinospora, *Miers* ... ... i. 96
cordifolia, *Miers* ... ... „ 97
crispa, *Miers* ... ... „ 96
malabarica, *Miers* ... ... „ 96
palminervis, Miers ... ... „ 97
tomentosa, *Miers* ... ... „ 96
? uliginosa, *Miers* ... ... „ 97
TINOSPOREÆ ... ... i. 94
Tinus, Oerst. ... ... iii. 6
Tipularia, *Nutt.* ... ... v. 708
discolor, Nutt. ... ... „ 709
Josephi, *Rchb. f.* ... ... „ 708
Tiru-calli, Ham. ... ... v. 254
Tithymalus cognatus, Klotz. v. 261
divergens, Klotz. ... ... „ 264
himalayensis, Klotz. ... „ 258
Tittmannia angustifolia,
Benth. ... ... iv. 283
Colsmanni, Benth. ... ... „ 285
elata, Benth. ... ... „ 280
erecta, Benth. ... ... „ 281
grandiflora, Benth. ... ... „ 282
hirta, Benth. ... ... „ 281
obovata, Bunge ... ... „ 259
ovata, Benth. ... ... „ 280
ovata, Rchb. ... ... „ 279
pusilla, Benth. ... ... „ 281
sulcata, Wight ... ... „ 281
trichotoma, Benth. ... ... „ 280
viscosa, Rchb. ... ... „ 280
sp., Griff. ... ... „ 281
Tocoyena scandens, Bl. ... iii. 111
Todda Panna, Rheede ... v. 656
Toddalia, *Juss.* ... ... i. 497
aculeata, *Pers.* ... ... „ 497
? *angustifolia*, Lamk. ... „ 497
Toddalia Vol. Page
angustifolia, Miq. ... ... i. 497
asiatica, Lamk. ... ... „ 497
bilocularis, *W. & A.* ... „ 497
floribunda, Wall. ... ... „ 497
mitis, Miq. ... ... „ 492
nitida, Lamk. ... ... „ 497
rubicaulis, Willd. ... ... „ 497
TODDALIEÆ ... ... i. 484
Tofieldia, *Huds.* ... ... vi. 357
himalaica, *Baker* ... ... „ 358
nepalensis, Str. & Wint. „ 265
nepalensis, Wall. ... ... „ 264
Tomex, Forsk. ... ... iii. 619
glabra, Forsk. ... ... „ 619
Tomex, Linn. ... ... iv. 567
tomentosa, Linn. ... ... „ 567
Tomex, Thunb. ... ... v. 168
Doshia, Ham. ... ... „ 168
pubescens, Willd. ... ... „ 163
sebifera, Willd. ... ... „ 158
tetranthera, Willd. ... ... „ 158
Tonsella disperma, Poir. ... i. 625
prinoides, Willd. ... ... „ 626
Toona ciliata, Rœm. ... ... i. 569
febrifuga, Rœm. ... ... „ 569
hexandra, Rœm. ... ... „ 569
longifolia, Rœm. ... ... „ 569
serrata, Rœm. ... ... „ 569
? *velutina*, Rœm. ... ... „ 568
? *villosa*, Rœm. ... ... „ 568
Tordyliopsis Brunonis, DC. ii. 713
Tordylium Anthriscus, Linn. ii. 718
? *Brunonis*, Wall. ... ... „ 713
latifolium, Linn. ... ... „ 719
Torenia, *Linn.* ... ... iv. 275, 734
alba, Ham. ... ... iv. 276, 279
asiatica, *Linn.* ... ... iv. 277
asiatica, Benth. ... ... „ 276
asiatica, Thw. ... ... „ 277
asiatica, Wall. ... ... „ 277
asiatica, Wight ... ... „ 278
Bailloni, Godef. ... ... „ 278
bicolor, *Dalz.* ... ... „ 278
calcarata, Griff. ... ... „ 283
cardiosepala, Benth. ... „ 276
ciliata, *Sm.* ... ... „ 278
cærulea, Miq. ... ... „ 279
concolor, Lindl. ... iv. 277, 734
cordifolia, *Roxb.* ... ... iv. 276
cordifolia, Benth. ... ... „ 277
cordifolia, Wight ... ... „ 276
diffusa, D. Don ... ... „ 277
diffusa, Roxb. ... ... „ 282
edentula, *Griff.* ... ... „ 279
edentula, Benth. ... ... „ 276
? *exappendiculata*, Regel... „ 276
flaccida, Br. ... ... „ 279

Torenia — Vol. Page
flava, *Ham.* ... iv. 278
flava, Wall. ... „ 279
globosa, Ham. ... „ 281
gracilis, Benth. ... „ 285
hians, Roxb. ... „ 277
hirsuta, Benth. ... „ 277
hirta, Cham. & Schl. ... „ 281
hirtella, *Hk. f.* ... „ 277
lepidota, Roth ... „ 301
longiflora, Morren ... „ 277
lucida, Ham. ... „ 279
mollugInoides, Benth. ... „ 280
mucronulata, *Benth.* ... „ 276
multiflora, Roxb. ... „ 280
parviflora, *Ham.* ... „ 278
peduncularis, *Benth.* ... „ 276
peduncularis, Benth. ... „ 279
polygonoides, *Benth.* ... „ 276
racemosa, Benth. ... „ 279
rubens, Benth. ... iv. 277, 734
rubens, Thw. ... iv. 277
sessiliflora, Benth. ... „ 282
vagans, *Roxb.* ... „ 277
varians, Griff. ... „ 282
varians, Roxb. ... „ 279
sp., Hk. f. & T. ... „ 280
sp., Miq. ... „ 278
Toricellia, *DC.* ... ii. 748
tiliæfolia, *DC.* ... „ 748
Torilis Anthriscus, Gmel. ... ii. 718
elata, DC. ... „ 718
japonica, DC. ... „ 718
Torresia biflora, R. & S. ... vii. 332
? *latifolia*, Beauv. ... „ 332
Tortula aspera, Roxb. ... iv. 565
Tournefortia, *Linn.* ... iv. 145
arborescens, Lamk. ... „ 147
argentea, *Linn. f.* ... „ 145
Candollii, *Clarke* ... „ 146
cymosa, Heyne ... „ 145
Edgeworthii, DC. ... „ 148
Heyneana, *Wall.* ... „ 145
Heyneana, DC. ... „ 146
Hookeri, *Clarke* ... „ 147
khasiana, *Clarke* ... „ 147
ovata, *Wall.* ... „ 147
reticosa, *Wight* ... „ 146
Roxburghii, *Clarke* ... iv. 146, 153
Royleana, DC. ... iv. 148
subulata, Hochst. ... „ 148
ternata, Wall. ... „ 147
tetrandra, Bl. ... „ 147
tetrandra, Wall. ... „ 147
viridiflora, *Wall.* ... „ 146
viridiflora, Gamble ... „ 147
Walkeræ, *Clarke* ... „ 147
Wallichii, *DC.* ... „ 147
Tournefortia — Vol. Page
Wallichii, Thw. ... iv. 147
Wightii, *Clarke* ... „ 146
zeylanica, Wight ... „ 148
Tovaria fusca, Baker ... vi. 323
oleracea, Baker ... „ 323
oligopyhlla, Baker ... „ 323
pallida, Baker ... „ 323
purpurea, Baker ... „ 323
Toxicodendrum Cobbe, Gærtn. i. 674
Toxocarpus, *W. & A.* ... iv. 13
acuminatus, *Benth.* ... „ 15
concanensis, *Hk. f.* ... „ 14
crassifolius, Dalz. & Gibs. „ 16
crassifolius, Wight ... „ 16
eriocarpus, *Hk. f.* ... „ 15
Griffithii, *Dcne.* ... „ 13
himalensis, *Falc.* ... „ 13
Kleinii, *W. & A.* ... „ 14
Kurzii, *Hk. f.* ... „ 15
laurifolius, Wight ... „ 16
Roxburghii, *W. & A.* ... „ 14
Roxburghii, Griff. ... „ 15
villosus, *Dcne.* ... „ 13
? Wightianus, *Hook. & Arn.* „ 15
sp., Griff. ... „ 13
Trachelospermum, *Lemaire* iii. 667
axillare, *Hk. f.* ... „ 668
fragrans, *Hk. f.* ... „ 667
gracilipes, *Hk. f.* ... „ 668
Trachycarpus, *H. Wdl.* ... vi. 435
excelsa, *H. Wdl.* ... „ 436
Fortunei, H. Wdl. ... „ 436
khasiana, H. Wdl. ... „ 436
Martiana, *H. Wdl.* ... „ 436
Trachydium, *Lindl.* ... ii. 671
dissectum, *Clarke* ... „ 672
hirsutulum, *Clarke* ... „ 672
novem-jugum, *Clarke* ... „ 672
obtusiusculum, *Clarke* ... „ 673
Roylei, *Lindl.* (see *Errata*) „ 672
sp, Hk. f. & T. ... ii. 672, 673
Trachyozus muricata, Steud. vii. 96
Trachypogon *avenaceus*, Nees vii. 182
cæsius, Nees ... „ 205
fasciculatus, Munro ... „ 138
polymorphus, Hack. ... „ 210
Trachys, *Pers.* ... vii. 96
mucronata, *Pers.* ... „ 96
mucronata, Steud. ... „ 96
muricata, Steud. ... „ 96
Trachystachys geminata, A. Dietr. ... vii. 96
Tradescantia aphylla, Heyne vi. 375
axillaris, Linn. ... „ 389
barbata, Spreng. ... „ 385
cordifolia, Griff. ... „ 389
cristata, Heyne ... „ 385

Tradescantia Vol. Page
cristata, Jacq. ... ... vi. 385
? *cyanotidea*, Hassk. ... „ 387
fasciculata, Heyne ... ... „ 388
gangetica, Linn. ... .. , 381
imbricata, Roxb. ... ... „ 385
incana, Heyne ... ... „ 386
lanata, Heyne ... ... „ 386
malabarica, Linn. ... ... „ 379
montana, Heyne ... ... „ 382
paniculata, Roth ... ... „ 382
paniculata, Roxb. ... ... „ 390
papilionacea, Linn. ... ... „ 385
pilosa, Heyne ... ... „ 387
radicans, Royle ... ... „ 385
rufa, Presl ... ... „ 390
rupestris, Law ... ... vi. 385, 388
terminalis, Bl. ... ... vi. 380
thyrsiflora, Bl. ... ... „ 367
triflora, Heyne ... ... „ 369
tuberosa, Roxb. ... ... „ 386
umbellata, Heyne ... ... „ 385
vaga, Bl. ... ... „ 387
villosa, Spreng. ... ... „ 387
sp., Griff. ... ... „ 383
TRADESCANTIEÆ ... ... vi. 367
Tragia, *Linn.* ... ... v. 464
bicolor, *Miq* ... ... „ 465
burmanica, *Kurz* ... ... „ 466
cannabina, Linn. ... ... „ 465
Chamælea, Linn. ... ... „ 475
cordata, Heyne ... ... „ 465
glabrata, Heyne ... ... „ 287
hastata, Reinw. ... ... „ 466
hispida, Russell ... ... „ 465
hispida, Willd. ... ... „ 465
involucrata, *Linn.* ... ... „ 465
macrophylla, Wall. ... ... „ 466
Mercurialis, Linn. ... ... „ 412
Miqueliana, Muell. ... ... „ 465
montana, Muell. ... ... „ 465
rugosa, Wall. ... ... v. 449, 466
tenuis, Hb. Madr. ... ... v. 416
Tragopogon, *Linn.* ... ... iii. 417
gracile, *D. Don* ... ... „ 417
junceum, Wall. ... ... „ 417
porrifolium, *Linn.* ... ... „ 418
pratense, *Linn.* ... ... „ 418
Tragularia horrida, Kœn. ... iv. 711
Tragus, Haller ... ... vii. 96
alienus, Schult. ... ... „ 97
Berteronianus, Schult. ... „ 97
biflorus, Nees ... ... „ 97
biflorus, Schult. ... ... „ 97
brevicaulis, Boiss. ... ... „ 97
gracilis, Panz. ... ... „ 363
Halleri, Doell. ... ... „ 97
inermis, Panz. ... ... „ 357

Tragus Vol. Page
muricatus, Moench ... ... vii. 97
occidentalis, Nees ... ... „ 97
orientalis, Nees ... ... „ 97
pinnatus, Panz. ... ... „ 363
racemosus, *Scop.* ... ... „ 97
senegalensis, J. Gay ... „ 97
Trapa, *Linn.* ... ... ii. 590
bispinosa, *Roxb.* ... ... „ 590
natans, *Linn.* ... ... „ 590
quadrispinosa, Roxb. ... „ 590
quadrispinosa, Wall. ... „ 590
Treisteria (lapsu *Tresteira* and *Tristeria*)
assamica, Griff. ... ... iv. 275
cordata, Griff. ... ... „ 277
lanceolata, Griff. ... ... „ 279
Trema, *Lour.* ... ... v. 483
amboinensis, *Bl.* ... , 484
angustifolia, *Bl.* ... ... „ 484
Burmanni, Bl. ... ... „ 484
? *cannabina*, Lour. ... ... „ 484
orientalis, *Bl.* ... ... „ 484
politoria, *Planch* ... ... „ 484
timorensis, *Bl.* ... ... „ 483
velutina, Bl. ... ... „ 484
virgata, Bl. ... ... „ 483
Trembleya rhinanthera, Griff. ii. 523
Trentepohlia, Boeck. ... ... vi. 597
bifoliata, Boeck. ... ... „ 597
Tresteira, vide *Treisteria*
Treutlera, *Hk. f.* ... ... iv. 45
insignis, *Hk. f.* ... ... „ 45
Trevesia, *Vis.* ... ... ii. 731
insignis, *Miq.* ... ... „ 732
palmata, *Vis.* ... ... „ 732
sundaica, Regel ... ... „ 732
Trewia, *Linn.* ... ... v. 423
discolor, Sm. ... ... „ 424
hernandifolia, Roth ... v. 424, 416
macrophylla, Roth ... ... v. 423
macrostachya, Klotz ... , 423
nudiflora, *Linn.* ... ... „ 423
nudiflora, Wight ... ... „ 424
polycarpa, *Benth.* .. . „ 424
rusciflora, Heyne ... ... „ 524
tricuspidata, Willd. ... „ 430
Triachyrum cordofanum, Hochst. ... ... vii 253
discosporum, Steud. ... „ 253
nilagiricum, Steud. ... ... „ 251
Triactina, *Hk. f. & T.* ... ii. 423
verticillata, *Hk. f. & T.* ... „ 423
Triænanthus Griffithianus, Nees ... ... iv. 470
Trianthema, *Linn.* ... ... ii. 660
crystallina, *Vahl* ... ... „ 660
decandra, *Linn.* ... ... „ 661

Trianthema Vol. Page
Govindia, Wall. ii. 660
hydaspica, *Edgew.* „ 661
monogyna, *Linn.* „ 660
obcordata, Roxb. „ 660
obcordata, Wall. „ 660
pentandra, *Linn.* „ 660
polysperma, Hochst. „ 661
polysperma, Oliv. „ 661
sedifolia, Vis. „ 660
triquetra, Rottl. „ 660
Trias, *Lindl.* v. 780
oblonga, *Lindl.* „ 780
ovata, *Lindl.* „ 781
picta, *Benth.* „ 780
Stocksii, *Benth.* „ 781
Triathera bromoides, Roth vii. 287
Tribrachia hirta, Lindl. v. 762
odoratissima, Lindl. „ 758
purpurea, Lindl. „ 760
reptans, Lindl. „ 769
Tribrachys Gardneriana, Champ. v. 666
Tribulus, *Linn.* i. 423
alatus, *Del.* „ 423
cistoides, *Linn.* „ 423
lanuginosus, Linn. „ 423
terrestris, *Linn.* „ 423
Tricera nepalensis, Wall. v. 266, 267
Trichadenia, *Thw.* i. 196
zeylanica, *Thw.* „ 196
Trichaurus ericoides, W. & A. i. 249
Trichelostylis, Lestib. vi. 641
asperrima, Nees „ 643
chætorrhiza, Nees „ 647
cinnamometorum, Nees „ 650
complanata, Nees „ 646
curvifolia, Nees „ 636
digitata, Hk. f. & T. „ 648
filiformis, Nees „ 633
globulosa, Nees „ 645
junciformis, Nees „ 647
latifolia, Nees „ 648
miliacea, Nees „ 644
pentaptera, Nees „ 645
quinquangularis, Nees „ 644
Salbundia, Nees „ 645
scabra, Nees „ 646
tenella, Nees „ 642
tetragona, Nees „ 644
torta, Nees „ 648
sp., Hk. f. & T. vi. 642, 643, 645, 646, 648

Trichilia coriacea, Wall. i. 564
? *longissima*, Wall. „ 552
nervosa, Vahl „ 553
spinosa, Willd. „ 512
trifoliata, Wall. „ 564

Trichilia Vol. Page
venosa, Spreng. i. 553
? *villosa*, Wall. „ 564
TRICHILIEÆ i. 540
Trichodesma, *Br.* iv. 153
africanum, *Br.* „ 154
amplexicaule, *Roth* „ 153
hirsutum, Edgew. „ 153
inæquale, Edgew. „ 154
indicum, *Br.* „ 153
indicum, DC. „ 154
khasianum, *Clarke* „ 154
perfoliatum, Wall. „ 153
subsessile, Wall.* „ 153
zeylanicum, *Br.* „ 154
Trichodia vareciformis, Griff. ii. 600
Trichodium caninum, Schrad. vii. 255
Trichoglottis, *Bl.* vi. 42
Dawsoniana, *Rchb. f.* „ 43
fasciata, Rchb. f. „ 43
quadricornuta, *Kurz* „ 43
retusa, Bl. „ 43
Trichogyne cauliflora, DC. iii. 278
Tricholæna, *Schrad.* vii. 64
? *fusca*, Schult. „ 120
micrantha, Schrad. „ 65
Teneriffæ, *Parlat.* „ 65
tuberculosa, Hack. „ 65
Wightii, *Nees & Arn.* „ 65
sp., Wall. „ 65
Tricholepis, *DC.* iii. 379
amplexicaulis, *Clarke* „ 381
angustifolia, *DC.* * „ 382
Candolleana, Wight „ 383
elongata, *DC.* „ 380
furcata, *DC.* „ 380
glaberrima, *DC.* „ 381
karensium, *Kurz* „ 380
lanuginosa, Klotz. „ 380
montana, *Dalz. & Gibs.* „ 383
nigricans, Edgew. (*nigrescens*) „ 380
procumbens, Wight „ 383
radicans, *DC.* „ 381
Roylei, *Hk. f.* „ 383
spartoides, Clarke „ 382
Stewartei, *Clarke* „ 380
stictophylla, *Clarke* „ 382
tibetica, *Hk. f. & T.* „ 382
Trichoon Karka, Roth vii. 304
Trichophorum arundinaceum, Strach. vi. 664
comosum, Strach. „ 664
cyperinum, Pers. „ 661
Trichopodium angustifolium, Lindl. vi. 297
cordatum, Lindl. „ 297
intermedium, Lindl. „ 297

Vol. Page
Trichopodium
zeylanicum, Thw. ... ... vi. 297
Trichopus, *Gærtn.* ... ... vi. 297
zeylanicus, *Gærtn.* ... .. „ 297
Trichosanthes, *Linn.* ... ... ii. 606
anguina, *Linn.* ... ... „ 610
anguina, Wall. ... ... „ 607
aspera, Heyne ... ... „ 606
bracteata, Kurz ... ... „ 607
cordata, *Roxb.* ... ... „ 608
cordata, Wall. ... ... ii. 607, 608
cucumerina, *Linn.* ... ... ii 609
cucumerina, Wall. ... ... „ 611
cuspidata, Lamk. .. ... „ 609
dicælosperma, *Clarke* ... „ 609
dioica, *Roxb.* ... ... „ 609
dioica, Wall. ... ... „ 623
? *Fatoa*, Ham. ... ... „ 611
fœtidissima, Jacq. ... ... „ 627
grandibracteata, Kurz ... „ 607
grandiflora, Wall. ... ... „ 606
heteroclita, Roxb. ... ... „ 606
himalensis, *Clarke* ... ... „ 608
integrifolia, *Thw.* ... ... „ 610
integrifolia, Kurz ... ... „ 612
japonica, Regel ... ... „ 607
laciniosa, Klein ... ... „ 609
laciniosa, Wall. ... ... „ 606
lobata, *Roxb.* ... ... „ 610
lobata, Kurz ... ... „ 610
macrosiphon, Kurz ... ii. 608, 610
multiloba, *Miq.* (see Errata) ii. 607
nervifolia, *Linn.* ... ... „ 609
officinalis, Wall. ... ... „ 612
palmata, *Roxb.* ... ... „ 606
palmata, Wall. ... ... „ 608
pilosa, Wall. ... ... „ 609
? *reniformis*, Kurz ... ... „ 609
reniformis, Miq. ... ... „ 609
Russeliana, Wall. ... ... „ 617
subvelutina, Muell. ... ... „ 607
tricuspis, Miq. ... ... „ 606
truncata, *Clarke* ... ... „ 608
tuberosa, Roxb. ... ... „ 608
sp., Griff. ... ... „ 610
sp., Hk. f. & T. ... ... „ 608
Trichosma, *Lindl.* ... ... v. 827
cylindripoda, Griff. (error for Eria) ... ... „ 827
suavis, *Lindl.* ... v. 827, vi. 193
Trichosporum, D. Don ... iv. 337
grandiflorum, D. Don ... „ 338
parviflorum, D. Don ... „ 339
radicans, Nees ... ... „ 343
Trichotosia, Bl ... ... v. 786
biflora, Griff. ... ... „ 806
ferox, Bl. ... ... „ 806
microphylla, Bl. ... ... „ 808
Tricostularia fimbristyloides, Benth. ... ... vi. 674
Tricyrtis, *Wall.* ... ... vi. 358
elegans, Wall. ... ... „ 359
pilosa, *Wall.* ... ... „ 359
Tridax, *Linn.* ... ... iii. 311
procumbens, *Linn.* ... ... „ 311
Tricens indicus, Nees ... ... vii. 329
Tridesmis, Spach ... ... i. 258
formosa, Korth. ... ... „ 258
ochnoides, Spach ... ... „ 258
pruniflora, Kurz ... ... „ 258
Tridesmis, Lour. ... ... v. 389
tomentosa, Lour. ... ... „ 389
TRIFOLIEÆ ... ... i. 57
Trifolium, *Linn.* ... ... i. 86
fragiferum, *Linn.* ... ... „ 86
indicum, Linn. ... ... „ 89
minus, Sm. ... ... „ 86
officinale, Willd. ... ... „ 89
pratense, *Linn.* ... ... „ 86
repens, *Linn.* ... . „ 86
resupinatum, Linn. ... ... „ 86
unifolium, Forsk. ... ... „ 103
venulosum, Royle ... ... „ 86
Triglochin, *Linn.* ... ... vi 563
maritimum, *Linn.* ... ... „ 563
palustre, *Linn.* ... ... „ 563
sp., Griff. ... . „ 563
Triglossum arundinaceum, Fisch. ... ... vii. 391
Trigonanthus pendulus, Korth. v. 826
Trigonella, *Linn.* .. ... ii. 87
arguta, Vis. ... ... „ 87
brahuica, Boiss. ... ... „ 87
cachemiriana, Camb. ... „ 88
corniculata, *Linn.* ... ... „ 88
elatior, Sibth. & Sm. ... „ 88
Emodi, *Benth.* ... ... „ 88
esculenta, Willd. ... ... „ 88
fimbriata, Royle ... ... „ 88
Fœnum græcum, *Linn.* ... „ 87
gracilis, *Benth.* ... ... „ 88
geminiflora, Bunge ... ... „ 87
hamosa, *Linn.* ... ... „ 88
himalaica, Wall. ... ... „ 88
incisa, Royle ... ... „ 87
indica, Linn. ... ... „ 63
monantha, C. A. Meyer ... „ 87
nervosa, Klotz. ... ... „ 88
obcordata, Wall. ... ... „ 88
occulta, *Delile* ... ... „ 87
orthoceras, Kar. & Kir. ... „ 87
pinnatifida, Cav. ... ... „ 87
polycerata, *Linn.* ... ... „ 87
pubescens, *Edgew.* ... ... „ 88
rhytidocarpa, Boiss. ... „ 88

Vol. Page
Trigoniastrum, *Miq.* ... ... i. 208
hypoleucum, *Miq.* ... ... „ 208
Trigonocarpus littoralis, Wall. ... ... i. 617
Trigonochlamys, *Hk. f.* ... i. 539
Griffithii, *Hk. f.* ... ... „ 539
Trigonopleura, *Hk. f.* ... ... v. 399
malayana, *Hk. f.* ... ... „ 399
Trigonostemon, *Bl.* ... ... v. 395
diplopetalus, *Thw.* ... ... „ 398
heteranthus, *Wight* ... ... „ 396
Hookerianus, Muell. ... ... „ 397
indicus, *Muell.* ... ... „ 398
lætus, *Baill.* ... ... „ 397
Lawianus, Muell. v. 394, 403, 404
longifolius, *Baill.* ... ... „ 396
malaccanus, *Muell.* ... ... v. 396
nemoralis, *Thw.* ... ... „ 398
semperflorens, *Muell.* ... „ 397
villosus, *Hk. f.* ... ... „ 397
zeylanicus, Muell. ... ... „ 400
Trigonotis, *Stev.* ... ... iv. 171
Hookeri, *Benth.* ... ... „ 173
microcarpa, *Benth.* ... ... „ 172
multicaulis, *Benth* ... ... „ 172
ovalifolia, *Benth.* ... ... „ 172
rotundifolia, *Benth.* ... ... „ 172
Triguera acerifolia, Cav. ... i. 336
Trilepis, Nees ... ... vi. 698
Royleana, Nees ... ... „ 698
Trillidium Govanianum, Kunth ... ... vi. 361
Trillium, *Linn.* ... ... vi. 361
Govanianum, *Wall.* ... ... „ 361
Tschonoskii, *Maxim.* ... „ 361
Trilobaria, *A. DC.* ... ... ii. 642
Trilophus, Lestib. ... ... vi. 220
Trimeriza piperina, Lindl. ... v. 73
Triniusa Danthoniæ, Steud. vii. 362
Triodia ambigua, Br. ... ... vii. 329
cynosuroides, Spreng. ... „ 295
splendida, Steud. ... ... „ 273
Triomma, *Hk. f.* ... ... i. 528
malaccensis, *Hk. f.* ... ... „ 528
Triosteum, *Linn.* ... ... iii. 8
himalayanum, Wall. ... „ 8
hirsutum, *Wall.* ... ... „ 8
hirsutum, Roxb. ... ... „ 180
Triphasia, *Lour.* ... ... i. 506
aurantiola, Lour. ... ... „ 507
? *sarmentosa*, Bl. ... ... „ 509
trifoliata, *DC.* ... i. 507, 508
Triplectrum radicans, W. & A. ii. 548
Tripleura pallida, Lindl. ... vi. 107
Triplostegia, *Wall.* ... ... iii. 215
glandulifera, *Wall.* ... „ 215
glandulosa, DC. ... ... „ 215

Vol. Page
Tripodanthera cochinchinense, Roem. ... ... ii. 611
Tripogon, *Roth* ... ... vii. 285
abyssinicus, *Nees* ... vii. 287, 422
bengalensis, Munro ... ... vii. 287
bromoides, *Roth* ... ... „ 287
bromoides, Benth. ... ... „ 287
capillatus, *J. & S.* ... ... „ 285
capitatus, Lisboa ... ... „ 285
festucoides, Clarke ... ... „ 287
festucoides, J. & S. ... ... „ 287
filiformis, *Nees* ... ... „ 288
Griffithii, W. & A. ... ... „ 287
Jacquemontii, *Stapf* ... „ 286
lanatus, Hochst. ... ... „ 287
Lisboæ, *Stapf* ... ... „ 286
minimus, Hochst. ... ... „ 287
Neesianus, W. & A. ... ... „ 287
pauperculus, *Stapf* ... ... „ 285
semitruncatus, Nees... ... „ 288
submuticus, Hack. ... ... „ 287
trifidus, *Munro* ... ... „ 286
unidentatus, Nees ... ... „ 288
Wightii, *Hk. f.* ... ... „ 286
zeylanicus, Nees ... ... „ 287
sp., Hk. f. & T. ... ... „ 286
sp., Lisboa ... ... „ 286
? *sp.*, Wall. ... ... vii. 243, 288
Tripsacum distachyum, Linn. vii. 96
? *semiteres*, Wall. ... ... „ 101
Tripteranthes pusillus, Wall. v. 665
Tripterospermum Championi, Gardn. ... ... iv. 108
trinerve, Bl. ... ... „ 107
Trisciadia, *Hk. f.* ... ... iii. 94
truncata, *Hk. f.* ... ... „ 94
Trisepalum, *Clarke* ... ... iv. 363
acutum, *Clarke* ... ... „ 364
obtusum, *Clarke* ... ... „ 363
Trisetum, Beauv. ... ... vii. 274
æneum, Hack. ... ... „ 280
airoides, R. & S. ... ... „ 278
andinum, Benth. ... ... „ 278
antarcticum, Trin. ... ... „ 278
aureum, Nees ... ... „ 280
Cavanillesii, Trin. ... ... „ 276
flavescens, Beauv. ... ... „ 279
Gaudinianum, Boiss. ... „ 276
grœnlandicum, Steud. ... „ 278
labradoricum, Steud. ... „ 278
Loefflingianum, Beauv. ... „ 276
Loeflingianum, Duthie ... „ 336
molle, Kunth ... ... „ 278
phleoides, Kunth ... ... „ 278
phleoides, Trin. ... ... „ 309
spiciforme, Dulac ... ... „ 278
subspicatum, Beauv. ... „ 278

Trisetum Vol. Page
toluccense, Kunth ... ... vii. 278
valesiacum, Boiss. ... ... „ 276
virescens, Nees ... ... „ 277
Tristachya, *Nees* ... ... vii. 271
barbata, *Nees* ... ... „ 272
Stocksii, Boiss. ... ... „ 272
Tristania, *R. Br.* ... ... ii. 465
burmannica, *Griff.* ... ... „ 466
conferta, Griff. ... ... „ 467
Griffithii, *Kurz* ... ... „ 467
Maingayi, *Duthie* ... ... „ 467
merguensis, *Griff.* ... ... „ 466
sumatrana, Miq. ... ... „ 466
Whitiana, *lapsu* Wightiana, *Griff.* ... ... ii. 466
sp., Griff ... ... ii. 466, 467
Tristellateia, *Thouars* ... ... i. 418
australasica, *A. Rich.* ... „ 418
Tristemma angustifolium, Bl. ii. 515
Tristeria, vide *Treisteria* ... iv. 275
Tristicha zeylanica, Gardn. v. 62
TRISTICHEÆ ... ... v. 62
Tritaxis, *Baill.* ... . v. 384
? **Beddomei**, *Benth.* ... ... „ 384
Cumingii, Benth. ... ... „ 384
zeylanica, Muell. ... ... „ 400
Tritheca pentandra, Miq. ... ii. 563
Trithyrocarpus oligospathus, Hassk. ... ... vi. 373
paleatus, Hassk. ... ... „ 373
Triticoides, Griff. ... ... vi. 698
Triticum, *Linn.* ... ... vii. 366
Ægilops, *Beauv.* ... „ 367
æstivum, Linn. ... ... „ 367
amyleum, Ser. ... ... „ 367
benghalense, Host ... ... „ 367
bromoides, Weber ... ... „ 363
compactum, Host ... ... „ 367
compositum, Linn. ... ... „ 367
dicoccum, Schrank ... ... „ 367
durum, Desf. ... ... , 367
elymoides, Hochst. ... ... „ 368
geminatum, Spreng. ... „ 294
gracile, Brot. ... ... „ 363
gracile, DC. ... ... „ 363
hispanicum, Willd. ... ... „ 356
hordeiforme, Wall. ... ... „ 371
hybernum, Linn. ... ... „ 367
longearistatum, J. & S. ... „ 368
macrourum, Turcz. ... ... „ 363
maritimum, Willd. ... ... „ 356
monococcum, Linn. ... ... „ 367
murale, Salisb. ... ... „ 372
Nardus, DC. ... ... „ 356
phœnicioides, DC. ... ... „ 363
pilosum, Dalz. & Gibs. ... „ 367
pinnatum, Mœnch ... ... „ 363
Triticum Vol. Page
polonicum, Linn. ... ... vii. 367
repens, Kunth ... ... „ 328
repens, Linn. ... ... „ 370
sativum, DC. ... ... „ 367
sativum, Linn. ... ... „ 367
scaberrimum, Steud. ... „ 363
Spelta, Linn. ... ... „ 367
striatum, Steud. ... ... „ 369
sylvaticum, Mœnch ... ... „ 363
tenellum, Viv. ... ... „ 356
turgidum, Linn. ... ... „ 367
unilaterale, Linn. ... ... „ 356
vulgare, *Vill.* ... ... „ 367
Zea, Host ... ... „ 367
Triumfetta, *Linn.* ... ... i. 394
angulata, Lamk. ... ... „ 395
annua, *Linn.* ... ... „ 396
Bartramia, Roxb. ... ... „ 395
bilocularis, Wall. ... ... „ 395
cana, *Bl.* ... ... „ 396
glabra, *Hb. Miss.* ... ... „ 395
glandulosa, Heyne ... ... „ 395
indica, Ham. ... ... „ 394
indica, Lamk. ... ... „ 396
? *microphylla*, W. & A. ... „ 396
neglecta, *W. & A.* ... ... „ 396
oblonga, Wall. ... ... „ 394
oblongata, Link ... ... „ 395
orbiculata, Kœn. ... ... „ 395
ovata, DC. ... ... „ 394
pentandra, Guill. & Perr. „ 396
pilosa, *Roth* ... ... „ 394
pilosa, Wall. ... ... „ 394
pilosula, Thw. ... ... „ 396
polycarpa, Wall. ... i. 395, 396
rhomboidea, *Jacquem.* ... i. 395
rotundifolia, *Lam.* ... ... „ 395
semitriloba, *Linn.* ... ... „ 396
suborbiculata, DC. ... ... „ 395
tomentosa, *Bojer* ... ... „ 394
tomentosa, Wall. ... ... „ 395
trichoclada, Link ... ... „ 396
trilocularis, *Roxb.* ... ... „ 395
vestita, Wall. ... ... i. 394, 395
TRIURIDEÆ ... ... vi. 558
Trochisandra indica, Bedd. i. 662
TROCHODENDREÆ ... ... i. 39
Trollius, *Linn.* ... ... i. 22
acaulis, *Lindl.* ... ... „ 22
americanus, DC. ... ... „ 22
laxus, Salisb. ... ... „ 22
patulus, Salisb. ... ... „ 22
pumilus, *D. Don* ... ... „ 22
pumilus, Royle ... ... „ 22
Troostwyckia singularis, Miq. ii. 47
Tropæolum pentaphyllum, Lamk. ... ... vi. 186

Vol. Page
Trophis aculeata, Roth ... v. 489, 491
aspera, Retz. ... ... v. 489
cochinchinensis, Poir. ... ,, 489
? *Heyneana*, Wall. ... ... ,, 488
spinosa, Bl. ... ... ,, 538
spinosa, Heyne ... ... ,, 491
spinosa, Roxb. ... ... ,, 488
taxiformis, Spreng. ... ... ,, 488
taxoides, Heyne ... ... ,, 488
Tropidia, *Lindl.* ... ... vi. 92
angulosa, *Bl.* ... ... ,, 92
assamica, Bl. ... ... ,, 93
curculigoides, *Lindl.* ... ,, 93
curculigoides, Kurz, lapsu *Cnemidia* ... ... ,, 94
Govindovii, Bl. ... ... ,, 92
graminea, *Bl.* ... ... ,, 93
Maingayi, *Hk. f.* ... ... ,, 93
pedunculata, Bl. ... ... ,, 93
semilibera, Bl. ... ... ,, 92
Thwaitesii, *Hk. f.* ... ... ,, 93
sp., ... ,, 94
Tryphera prostrata, Bl. ... ii. 662
Tsuga, *Carr.* ... ... v. 654
Brunoniana, *Carr.* ... ... ,, 654
Tulasnea foliosa, Wight ... v. 63
ceylanica, Wight, lapsu *Terniola* ... ... ,, 62
Lawii, Wight ... ... ,, 63
pedunculosa, Wight ... ... ,, 63
ramosissima, Wight ... ,, 63
Tulipa, *Linn.* ... ... vi. 354
chrysantha, *Boiss.* ... ... ,, 355
Clusiana, DC. ... ... ,, 355
Lehmanniana, Merckl. ... ,, 355
stellata, *Hook.* ... ... ,, 355
undulata, Jacquem. .. ,, 355
TULIPEÆ ... ... vi. 301
Tunga diandra, Roxb. ... ... vi. 678
lævigata, Roxb. ... ... ,, 667
triceps, Roxb. ... ... ,, 667
Tunica, *Scop.* ... ... i. 215
stricta, *Bunge* ... ... ,, 216
Tupidanthus, *Hk. f. & T.* ... ii. 740
calyptratus, *Hk. f. & T.* ... ,, 740
Tupistra, *Ker* ... ... vi. 324
aurantiaca, *Wall.* ... ... ,, 325
Clarkei, *Hk. f.* ... ... ,, 325
macrostigma, *Baker* ... ,, 325
nutans, *Wall.* ... ... ,, 324
singapureana, *Wall.* ... ,, 325
squalida, Baker ... ... ,, 324
Stoliczkana, *Kurz* ... ... ,, 325
Wattii, *Hk. f.* ... ... ,, 325
? *sp.*, Griff. ... ... ,, 325
Turgenia latifolia, Hoffm. ... ii. 719
Turpinia, *Vent.* ... ... i. 698

Turpinia Vol. Page
latifolia, Wall. ... ... i. 699
martabanica, Wall. ... ... ,, 699
microcarpa, W. & A. ... ,, 699
nepalensis, Wall. ... ... ,, 699
pomifera, *DC.* ... ... ,, 698
Turræa, *Linn.* ... ... i. 541
alata, Wight ... ... ,, 542
pinnata, Wall. ... ... ,, 543
trichostylis, Miq. ... ... ,, 379
villosa, *Benn.* ... ... ,, 542
virens, *Linn.* ... ... ,, 541
virens, Hellen. ... ... ,, 542
Turraya napalensis, Wall. .. vii. 94
Turritis glabra, DC. ... ... i. 135
rigida, Wall. ... ... ,, 135
Tussilago, *Linn.* ... ... iii. 330
Farfara, *Linn.* ... ... ,, 330
macrophylla, Wall. ... ... ,, 391
rupestris, Wall. ... ... ,, 330
Tylophora, *Br.* ... ... iv. 39
asthmatica, *W. & A.* ... ,, 44
asthmatica, Wight .. ... ,, 26
Belostemma, *Benth.* ... ,, 43
capparidifolia, *W. & A.* ... ,, 41
carnosa, Dalz. & Gibs. ... ,, 44
carnosa, Wall. ... ... ,, 42
cordifolia, *Thw.* ... ... ,, 44
Dalzellii, *Hk. f.* ... ... ,, 43
exilis, *Coleb.* ... ... ,, 44
fasciculata, *Ham.* ... ... ,, 40
fasciculata, Thw. ... ... ,, 40
globifera, *Hk. f.* ... ... ,, 41
Govanii, *Dcne.* ... ... ,, 40
Helferi, *Hk. f.* ... ... ,, 40
himalaica, *Hk. f.* ... ... ,, 42
hirsuta, *Wight* ... ... ,, 43
Iphisia, *Dcne.* ... ... ,, 40
Jacquemontii, Dcne. ... ,, 43
longifolia, *Wight* ... ... ,, 42
macrantha, *Hk. f.* ... ... ,, 40
micrantha, Thw. ... ... ,, 42
microstachys, *Hk. f.* ... ,, 733
mollissima, Wall. ... ... ,, 43
mollissima, *Wight* ... ... ,, 43
pauciflora, *W. & A.* ... ,, 41
pauciflora, Hohen. ... ... ,, 40
pauciflora, ? Hk. f. & T. ... ,, 44
pubescens, Wall. ... ... ,, 45
purpurea, *Wall.* ... ... ,, 41
rotundifolia, *Ham.* ... ... ,, 43
tenerrima, *Wight* ... ... ,, 44
tenuis, *Bl.* ... ... ,, 42
tenuissima, W. & A. ... ,, 42
villosa, Bl. ... ... ,, 43
Wallichii, *Hk. f.* ... ... ,, 45
zeylanica, *Dcne.* ... ... ,, 42
sp., Miq. ... ... ,, 7

Vol. Page
Tylostylis sp., Bl. ... v 802
Typha, *Linn.* ... vi. 488
angustata, *Chaub. & Bory* ,, 489
angustifolia, Kurz ... ,, 489
angustifolia, Linn. ... ,, 489
angustifolia, Thw. ... ,, 489
elephantina, *Roxb.* ... ,, 489
javanica, *Schnizl.* ... ,, 489
latifolia, Edgew. ... ,, 489
latifolia, Moon ... ,, 489
Laxmanni, *Lepech.* ... ,, 489
Maresii, Balland. ... ,, 489
Martini, Aitch. ... ,, 489
minima, Kurz ... ,, 489
stenophylla, Rohrb. ... ,, 489
TYPHACEÆ ... vi. 488
Typhonium, *Schott* ... vi. 509
brevipes, *Hk. f.* ... ,, 511
bulbiferum, *Dalz.* ... ,, 511
crenatum, Schott ... ,, 512
cuspidatum, *Bl.* ... ,, 511
divaricatum, *Dcne.* ... ,, 510
diversifolium, *Wall.* ... ,, 510
fallax, N. E. Br. ... ,, 511
flagelliforme, Bl. ... ,, 511
foliolosum, Engler ... ,, 510
gracile, *Schott* ... ,, 512
Huegelianum, Schott ... ,, 510
javanicum, Miq. ... ,, 510
minutum, Bl. ... ,, 513
minutum, Schott ... ,, 512
Motleyanum, *Schott* ... ,, 510
orixense, Schott ... ,, 509
pedatum, *Schott* ... ,, 511
pedatum, Schott ... ,, 511
Roxburghii, *Schott* ... ,, 510
siamense, Engler ... ,, 509
trilobatum, *Schott* ... ,, 509
triste, Griff. ... ,, 509
Tytonia natans, G. Don ... i. 483

ULMEÆ ... v. 477
Ulmus, *Linn.* ... v. 480
campestris, Linn. ... ,, 480
erosa, Roth ... ,, 480
erosa, Wall. ... ,, 480
Hookeriana, Planch. ... ,, 480
integrifolia, Roxb. ... ,, 481
lævigata, Royle ... ,, 480
lancifolia, *Roxb.* ... ,, 480
parvifolia, *Jacquem.* ... ,, 481
pedunculata, Hk. f. & T. ,, 480
pumila, Hk. f. & T. ... ,, 481
virgata, Roxb. ... ,, 481
Wallichiana, *Planch.* ... ,, 480
Umbellifera, Griff. ... ii. 687, 697
UMBELLIFERÆ ... ii. 665

Vol. Page
Umbilicus fimbriatus, Turcz. ii. 416
luteus, Dcne. ... ,, 416
Oreades, Dcne. ... ,, 416
radicans, Klotz. ... ,, 420
spathulatus, Hk. f. & T. ... ,, 416
spinosus, DC. ... ,, 416
spinosus, Turcz. ... ,, 416
Uncaria, *Schreb.* ... iii. 28
acida, Roxb. ... ,, 33
acida, Kew distrib. ... ,, 31
attenuata, *Korth.* ... ,, 29
brevispina? Kew distrib. ,, 31
canescens, *Korth.* ... ,, 29
cirrhiflora, Roxb. ... ,, 34
dasyoneura, *Korth.* ... ,, 31
elliptica, Br. ... ,, 31
ferrea, *DC.* ... ,, 33
ferruginea, DC. ... ,, 28
ferruginea, Kurz ... ,, 28
Gambier, *Roxb.* ... ,, 31
Gambier, Thw. ... ,, 31
Gambier, Wall. ... ,, 29
Hallii, Korth. ... ,, 28
homomalla, *Miq.* ... ,, 30
Horsfieldiana, Miq. ... ,, 33
insignis, DC. ... ,, 28
jasminiflora, *Wall.* ... ,, 32
lævigata, *Wall.* ... ,, 30
lanosa, *Wall.* ... ,, 33
Lobbii, *Hk. f.* ... ,, 33
macrophylla, *Wall.* ... ,, 32
ovalifolia, *Roxb.* ... ,, 30
? ovalifolia, Roxb. ... ,, 30
ovata, *Br.* ... ,, 29
pedicellata, *Roxb.* ... ,, 28
pedicellata, Bl. ... ,, 28
pedicellata, DC. ... ,, 28
pilosa, *Roxb.* ... ,, 32
pilosa, Wall. ... ,, 30
pteropoda, *Miq.* ... ,, 29
Roxburghiana, *Korth.* ... ,, 32
sclerophylla, *Roxb.* ... ,, 28
sclerophylla, DC. ... ,, 28
sclerophylla, Deless. ... ,, 29
sclerophylla, Wall. ... ,, 28
sessilifolia, Roxb. ... ,, 32
sessilifructus, *Roxb.* ... ,, 30
speciosa, Wall. ... ,, 28
Uncifera, Lindl. ... vi. 54, 179
acuminata, Lindl. ... vi. 65
obtusifolia, Lindl. ... ,, 65
Uncinia europæa, J. Gay ... vi. 712
microglochin, Spreng. ... ,, 712
nepalensis, Nees ... ,, 712
Ungeria monocephala, Nees vi. 597
Uniola bipinnata, Linn. ... vii. 325
indica, Spreng. ... ,, 317

Uniola Vol. Page
lappacea, Trin. ... ... vii. 332
? *mucronata*, Linn. ... ... „ 328
Unona, *Linn.* ... ... i. 58
Alphonsii, Wall. ... ... „ 62
cauliflora, *Hk. f. & T.* ... „ 60
chinensis, DC. ... ... „ 59
cochinchinensis, DC. ... „ 59
cordifolia, Roxb. ... ... „ 59
crinita, *Hk. f. & T.* ... ... „ 61
Dasymaschala, *Bl.* ... ... „ 61
desmantha, *Hk. f. & T.* ... „ 61
Desmos, *Dun.* ... ... „ 59
discolor, *Vahl* ... ... „ 59
dumosa, *Roxb.* ... ... „ 59
Dunalii, *Wall* ... ... „ 58
Dunalii, Hk. f. & T. ... „ 59
elegans, *Thw.* ... ... „ 58
fulva, Wall. ... ... „ 59
grandiflora, DC. ... ... „ 47
hamata, Dun. ... ... „ 54
hypoglauca, Miq. ... ... „ 63
latifolia, *Hk. f. & T.* ... „ 60
Lawii, *Hk. f. & T.* ... ... „ 59
leptopetala, Dun. ... ... „ 56
longiflora, *Roxb.* ... ... „ 61
Narum, Dun. ... ... „ 50
odorata, Dun. ... ... „ 56
pannosa, *Dalz.* ... ... „ 58
pedunculosa, A. DC. ... „ 59
præcox, *Hk. f. & T.* ... ... „ 60
pycnantha, *Hk. f. & T.* ... „ 60
stenopetala, *Hk. f. & T* ... „ 60
suaveolens, Bl. ... ... „ 55
undulata, Wall. ... ... „ 59
virgata, Bl. ... ... „ 57
viridiflora, *Bedd.* ... ... „ 60
zeylanica, *Hk. f. & T.* ... „ 58
UNONEÆ... ... ... i. 46
Uralepis Drummondii, Steud. vii. 329
fusca, Steud. ... ... „ 329
? *pungens*, Kunth ... ... „ 334
Uranda apicalis, Thw. ... i. 584
Urania speciosa, Wall. ... vi. 198
Uraria, *Desv.* ... ... ii. 155
alopecuroides, Wight ... „ 156
arborea, G. Don ... ... „ 156
campanulata, Wall. ... ... „ 155
cercifolia, Desv. ... ... „ 156
comosa, DC. ... ... „ 155
cordata, Wall. ... ... „ 157
cordifolia, *Wall.* ... ... „ 157
crinita, *Desv.* ... ... „ 155
desmodioides, Grah. ... „ 156
hamosa, *Wall.* ... ... „ 156
hamosa, Wall. ... ... „ 156
lagopodioides, Wall. ... „ 156
lagopoides, *DC.* ... ... „ 156
Uraria Vol. Page
Lagopus, *DC.* ... ... ii. 156
lanceolata, Grah. ... ... „ 156
leptostachya, Wall ... ... „ 156
linearis, Hassk. ... ... „ 155
obcordata, Miq. ... ... „ 166
picta, *Desv.* ... ... „ 155
picta, Wight ... ... „ 155
prunellæfolia, *Grah.* ... „ 157
repanda, *Wall.* ... ... „ 156
retrofracta, Wall. ... ... „ 160
retusa, Wall. ... ... „ 156
? *styracifolia*, W. & A. ... „ 170
Urceola, *Roxb.* ... ... iii. 657
brachysepala, *Hk. f.* ... „ 659
elastica, *Roxb.* ... ... „ 657
elastica, Wall. ... ... „ 658
esculenta, *Benth.* ... ... „ 658
lucida, *Benth.* ... ... „ 658
Maingayi, *Hk. f.* ... ... „ 658
malaccensis, *Hk. f.* ... .. „ 658
torulosa, *Hk. f.* ... ... „ 659
Urena, *Linn.* ... ... i. 329
cana, Wall. ... ... „ 329
cordata, Hb. Heyne ... „ 330
Hamiltoniana, Wall. ... „ 330
heterophylla, Sm. ... ... „ 330
Lappago, DC. ... ... „ 330
lobata, *Linn.* ... ... „ 329
morifolia, DC. ... ... „ 330
muricata, DC. ... ... „ 330
palmata, Roxb. ... . „ 329
repanda, *Roxb.* ... ... „ 330
rigida, *Wall.* ... ... „ 330
rigida, Wall. ... . „ 330
scabriuscula, DC. ... ... „ 329
scabriuscula, Wall. ... ... „ 329
sinuata, *Linn.* ... ... „ 329
speciosa, Wall. ... ... „ 330
tomentosa, Wall. ... ... „ 330
URENEÆ... ... ... i. 318
Urera Commersoniana, Wedd. v. 550
crenulata, Wedd. ... ... „ 550
gigantea, Gaud. ... ... „ 550
javensis, Gaud. ... ... „ 550
Urginea, *Steinh.* ... ... vi. 347
congesta, *Wight* ... ... „ 348
coromandeliana, *Hk. f.* ... „ 347
coromandeliana, Wight vi. 346, 347
indica, *Kunth* ... ... „ 347
indica, Wight ... ... „ 348
polyphylla, *Hk. f.* ... ... „ 348
senegalensis, Kunth ... ... „ 347
Wightiana, *Hk. f.* ... ... „ 347
Urochloa cimicina, Kunth ... vii. 64
mauritiana, Bojer ... ... „ 36
panicoides, Beauv. ... ... „ 35
paspaloides, Presl ... ... „ 33

Urochloa Vol. Page
pubescens, Kunth ... ... vii. 36
semi-alata, Kunth ... ... „ 64
Uropetalum concanense, Baker vi. 346
hydsuricum, Edgew. ... „ 347
montanum, Dalz. ... ... „ 346
serotinum, Ker ... ... „ 346
Urophyllum, *Wall.* ... ... iii. 97
arboreum, Korth. ... ... „ 98
biloculare, Kurz ... ... „ 125
Blumeanum, *Hk. f.* ... ... „ 99
coriaceum, Miq. ... ... „ 112
ellipticum, *Thw.* ... ... „ 97
glabrum, *Wall.* ... ... „ 98
glabrum, Wall. ... ... „ 99
Griffithianum, *Hk. f.* ... „ 98
hirsutum, *Hk. f.* ... ... „ 98
longifolium, *Hk. f.* ... ... „ 99
parviflorum, Wall. ... ... „ 99
repandulum, Miq. ... ... „ 98
streptopodium, *Wall.* ... „ 99
streptopodium, Wall. ... „ 99
strigosum, Kurz ... ... „ 99
villosum, *Wall.* ... ... „ 99
zeylanicum, *Thw.* ... ... „ 98
sp., Wall. ... ... iii. 98, 99
Urostachya, Lindl. ... .. v. 785
Urostigma acamptophyllum, Miq. ... ... v. 507
ægeirophyllum, Miq. ... „ 516
affine, Miq. ... ... „ 513
altissimum, Miq. ... ... „ 504
Ampelos, Dalz. & Gibs. ... „ 497
annulatum, Miq. ... ... „ 502
apiocarpum, Miq. ... ... „ 518
Arnottianum, Miq. ... ... „ 514
bengalense, Gasp. ... ... „ 499
Benjamina, Miq. ... ... „ 508
bicorne, Miq. ... ... „ 501
biverrucellum, Miq. ... ... „ 502
canaliculatum, Miq. ... ... „ 511
caulobotryum, Miq. ... ... „ 514
ceylonense, Miq. ... ... „ 514
chrysothrix, Miq. ... ... „ 501
circumscissum, Miq. ... ... „ 508
connivens, Miq. ... ... „ 501
conocarpum, Miq. ... ... „ 502
consociatum, Miq. ... ... „ 505
cordifolium, Dalz. & Gibs „ 514
cordifolium, Miq. ... ... „ 513
courtallense, Miq. ... ... „ 514
dasycarpum, Miq. ... ... „ 500
depressum, Miq. ... ... „ 502
elasticum, Miq. ... ... „ 508
euneuron, Miq. ... ... „ 512
flavescens, Miq. ... ... „ 502
glabellum, Miq. ... ... „ 511
glaberrimum, Miq. ... ... „ 506
Urostigma Vol. Page
globosum, Miq. ... ... v. 503
infectorium, Miq. ... v. 514, 516
Karet, Miq. ... ... v. 508
lacciferum, Miq. ... ... „ 504
Lambertianum, Dalz. & Gibs. „ 516
Lambertianum, Miq. ... „ 516
leucocarpum, Miq. ... ... „ 516
lucescens, Miq. ... ... „ 516
Manok, Miq. ... ... „ 503
microcarpum, Miq. ... ... „ 511
modestum, Miq. ... ... „ 512
modestum, Thw. ... ... „ 512
Moritzianum, Miq. ... ... „ 511
mysorense, Miq. ... ... „ 500
nervosum, Miq. ... ... „ 512
nitidum, Miq. ... ... „ 511
nudum, Miq. ... ... „ 508
obtusifolium, Miq. ... ... „ 508
obversum, Miq. ... ... „ 501
odoratum, Miq. ... ... „ 508
onustum, Miq. ... ... „ 503
ovoideum, Miq. ... ... „ 511
parvifolium, Miq. ... ... „ 511
peracutum, Miq. ... ... „ 502
perseæfolium, Miq. .. ... „ 516
pilosum, Miq. ... . „ 501
pisiferum, Miq. ... ... „ 511
pisocarpum, Miq. ... ... „ 510
pruniforme, Miq. ... ... „ 502
Pseudo-Benjamina, Miq. ... „ 515
? *Pseudo-rubrum*, Miq ... „ 507
Pseudo-Tjiela, Miq. ... ... „ 515
religiosum, Gasp. ... ... „ 513
retusum, Miq. ... ... „ 511
rhododendrifolium, Miq ... „ 510
rigidum, Miq. ... ... „ 505
rubescens, Miq. ... ... „ 506
Rumphii, Miq. ... ... „ 513
subcuspidatum, Miq. ... „ 501
sundaicum, Miq. ... ... „ 507
timorense, Miq. ... ... „ 516
Tjakela, Miq. ... ... „ 514
Tjiela, Miq. ... ... v. 507, 515
Tjiela, Thw. ... ... v. 509
tomentosum, Miq. ... ... „ 501
truncatum, Miq. ... ... „ 507
validum, Miq. ... ... „ 502
volubile, Dalz. ... ... „ 497
Wightianum Miq. ... v. 514, 516
xylophyllum, Miq. ... ... v. 504
Urtica, *Linn.* ... ... v. 547
acerifolia, Zenk. ... ... „ 551
affinis, Hk. & Arn. ... ... „ 549
alienata, Linn. ... ... „ 581
amœna, Wall. ... ... „ 545
angulata, Bl. ... ... „ 555
angustata, Bl. ... ... „ 590

Urtica Vol. Page
angustifolia, Ham. ... ... v. 577
anisophylla, Wall. ... ... „ 552
appendiculata, Wall. ... „ 589
aquatica, Moon ... ... „ 575
ardens, Link ... ... „ 548
bicolor, Roxb. ... ... „ 591
? *bicolor*, Wall. ... ... „ 590
blanda, Wall. ... ... „ 579
bracteata, Wight ... ... „ 585
candicans, Burm. ... ... „ 577
caudata, Burm. ... ... „ 578
caudata, Wall. ... ... „ 585
caudigera, Wall. ... ... „ 579
Chiple, Ham. ... ... „ 581
Churta, Ham. ... ... „ 550
cinerascens, Wall. ... ... „ 579
comosa, Ham. ... ... „ 576
crenulata, Roxb. ... ... „ 550
dioica, *Linn.* ... ... „ 548
diversifolia, Link ... ... „ 550
evitata, Wall. ... . „ 549
foliolosa, Wall. ... ... „ 585
frutescens, Roxb. ... „ 590
gigantea, Poir. ... ... „ 550
glaberrima, Bl. ... ... „ 553
glomerata, Wall. ... ... „ 581
Goglado, Ham. ... ... „ 553
grossa, Wall. ... ... „ 588
Hamiltoniana, Wall. v. 556, 579
heterophylla, Vahl ... ... v. 550
heterophylla, Wight ... „ 551
himalayensis, Kunth & Bouché ... ... „ 548
hippurioides, Griff. ... ... „ 583
hirta, Bl. ... ... „ 586
horrida, Link ... ... „ 550
hygrophila, Miq. ... ... „ 558
hyperborea, *Jacquem.* ... „ 548
incana, Bl. ... ... „ 589
interrupta, Linn. ... ... „ 549
javanica, Bl. ... ... „ 549
leucophylla, Wall. ... ... „ 591
lomatocarpa, Hochst. ... „ 549
longifolia, Burm. ... ... „ 590
macrostachya, Wall. v. 577, 578
malabarica, Wall. ... ... v. 575
microphylla, Linn. ... ... „ 551
mollissima, Bl. ... ... „ 589
muricata, Heyne ... ... „ 590
nana, Ham. ... ... „ 581
naucleiflora, Roxb. ... ... „ 545
nivea, Linn. ... ... „ 577
obesa, Wall. ... ... „ 554
palmata, Forsk. ... ... „ 550
palmata, Leschen. ... ... „ 551
paniculata, Royle ... ... „ 556
parviflora, *Roxb.* ... ... „ 548

Urtica Vol. Page
parviflora, Ham. ... ... v. 581
pauciflora, Hochst. ... ... „ 593
peduncularis, Sm. *lapsu* Pilea ... ... „ 557
penduliflora, Wall. ... ... „ 577
pentandra, Roxb. ... ... „ 583
pentandra, Wall. ... ... „ 583
peploides, Wedd. ... ... „ 554
pilulifera, Linn. ... ... „ 548
platyphylla, Ham. ... ... „ 578
polystachya, Wall. ... ... „ 579
pulcherrima, Roxb. ... ... „ 588
pulcherrima, Wall. ... ... „ 577
punctata, Ham. ... ... „ 581
Puya, Ham. ... ... „ 592
rivularis, Schlecht. ... ... „ 593
rugosissima, Reinw. ... „ 578
rugosula, Wall. ... ... „ 577
sanguinea, Bl. ... ... „ 581
scabrella, Roxb. ... ... „ 578
scripta, Ham. ... ... „ 556
sinuata, Bl. ... ... „ 550
smilacifolia, Wall. ... ... „ 553
spicigera, Steud. ... ... „ 549
squamigera, Wall. ... ... „ 580
stipulosa, Miq. ... ... „ 555
subperforata, Wall. ... ... „ 580
suffruticosa, Roxb. ... ... „ 581
superba, Wall. ... . „ 545
tenacissima, Roxb. ... ... „ 577
ternata, Heyne ... ... „ 584
triandra, Bl. ... ... „ 587
trinervia, Roxb. ... ... „ 557
triplinervis, Ham. ... ... „ 556
triplinervis, Heyne ... ... „ 557
triplinervis, Wall. ... ... „ 581
tuberosa, Roxb. ... ... „ 582
umbrosa, Wall. ... ... „ 556
uragera, Steud. ... ... „ 578
urophylla, Wall. ... ... „ 590
utilis, Hort. ... ... „ 577
venosa, Wall. ... ... v. 577, 579
verrucosa, Moon ... ... v. 590
vesicaria, Roxb. ... ... „ 582
viminea, Wall. ... ... v. 576, 581
virulenta, Wall. ... ... v. 548
zeylanica, Burm. ... ... „ 551
sp., Griff. ... ... „ 574
URTICACEÆ ... ... v. 477
Urticea, Wall. ... ... v. 493, 590
URTICEÆ ... ... v. 479
Usubis triphylla, Burm. ... i. 674
Utania morindæfolia, G. Don iv. 84
Utleria, *Bedd.* ... ... iv. 7
salicifolia, *Bedd* ... iv. 7, 733
Utricularia, *Linn.* ... ... iv. 328
acuta, Benj. ... ... „ 331

Utricularia Vol. Page
affinis, *Wight* ... ... iv. 330
alata, *Benj.* ... ... „ 335
albiflora, *Griff.* ... ... „ 335
albo-cœrulea, *Dalz.* ... ... „ 330
ambigua, DC. ... ... „ 335
arcuata, *Wight* ... ... „ 330
australis, Br. ... ... „ 329
bifida, *Linn.* ... ... „ 332
bifida, Wight ... ... „ 333
biflora, Roxb. ... ... „ 329
biflora, Wall. ... ... „ 332
Blumei, Miq. ... ... „ 329
brachiata, *Oliv.* ... ... „ 333
brachypoda, Wight ... ... „ 330
brevicaulis, Benj. ... ... „ 332
campestris, Miq. ... ... „ 333
capillacea, Thw. ... ... „ 332
capillacea, Vahl ... ... „ 332
capillacea, Wall. ... ... „ 332
capillacea, Wight ... ... „ 332
capillaris, *D. Don* ... ... „ 335
cœrulea, *Linn.* ... ... „ 331
cœrulea, A. DC. ... ... „ 333
cœrulea, Benth. ... ... „ 331
complanata, Wall. ... ... „ 333
conferta, Wight ... ... „ 331
confervifolia, D. Don ... „ 329
decipiens, Dalz. ... ... „ 330
diantha, A. DC. ... ... „ 332
diantha, R. & S. ... ... „ 329
diflora, Roxb. ... ... „ 329
elegans, Wall. ... ... „ 329
exoleta, *Br.* ... ... „ 329
extensa, Hance ... ... „ 329
fasciculata, Roxb. ... ... „ 329
filicaulis, Wall. ... ... „ 333
flexuosa, *Vahl* ... ... „ 329
foveolata, *Edgew.* ... ... „ 335
furcellata, *Oliv.* ... ... „ 334
glochidiata, Wight ... ... „ 334
graminifolia, Grah. ... ... „ 331
? *graminifolia*, Vahl ... „ 331
Griffithii, Wight ... ... „ 331
hirta, *Klein* ... ... „ 332
humilis, Heyne ... ... „ 332
inæqualis, Benj. ... ... „ 329
inflexa, Forsk. ... ... „ 329
kumaonensis, *Oliv.* ... ... , 334
lilacina, *Griff.* ... ... „ 335
macrocarpa, *Wall.* ... ... „ 328
macrolepis, Wight ... ... „ 332
minor, *Linn.* ... ... „ 330
minutissima. *Vahl* ... ... „ 334
multicaulis, *Oliv.* ... ... „ 334
nivea, Vahl ... ... „ 333
obtusiloba, *Benj.* ... ... „ 335
orbiculata, *Wall.* ... ... „ 334

Utricularia Vol. Page
oryzetorum, Miq. ... ... iv. 331
paucifolia, *Benj.* ... ... „ 335
pedicellata, Wight ... ... „ 331
polygaloides, Edgew. ... „ 332
pterosperma, Edgew. ... „ 329
punctata, *Wall.* ... ... „ 329
? *purpurascens*, Grah. ... „ 331
pusilla, Grah. ... ... „ 334
racemosa, *Wall.* ... ... „ 333
ramosa, *Vahl* ... ... „ 335
reticulata, *Sm.* ... ... „ 331
rosea, *Edgew.* ... ... „ 333
Roxburghii, Spreng. .. „ 329
scandens, *Benj.* ... ... „ 332
scandens, Benj. ... ... „ 332
setacea, Wall. ... ... iv. 332, 333
squamosa, *Benj.* ... ... iv. 335
squamosa, Wight ... ... „ 331
Smithiana, Wight ... ... „ 331
stellaris, *Linn. f.* ... ... „ 328
Thonningii, Schum. ... „ 329
uliginoides, Wight ... ... „ 331
uliginosa, Wight ... ... „ 331
verticillata, *Benj.* ... ... „ 333
volubilis, Wight ... ... „ 332
Wallichiana, *Wight* ... ... „ 332
Wallichiana, Benj. ... ... „ 332
Wallichiana, Wight ... „ 332
sp., Oliv. ... ... „ 331

Uvaria, *Linn.* ... ... i. 47
axillaris, Roxb. ... ... „ 56
bicolor, Roxb. ... ... „ 80
bicolor, Wall. ... ... „ 81
bracteata, *Roxb.* ... ... „ 49
cauliflora, Wall. ... ... „ 66
cerasoides, Roxb. ... ... „ 64
cordata, Wall. ... ... „ 49
coriacea, Vahl ... ... „ 51
costata, Wall. ... ... „ 67
dioica, Roxb. ... ... „ 87
dulcis, *Dun.* ... ... „ 48
elegans, Wall. ... ... „ 82
elliptica, A. DC. ... ... „ 92
excelsa, Wall. ... ... „ 77
farcta, Wall. ... ... „ 56
ferruginea, Ham. ... ... „ 52
fornicata, Roxb. ... ... „ 71
fulgens, Wall. ... ... „ 82
fulva, Wall. ... ... „ 79
gigantea, Wall. ... ... „ 75
Gomeziana, A. DC. ... ... „ 49
grandiflora, Roxb. ... ... „ 47
hamata, Roxb. ... ... „ 54
Hamiltoni, *Hk. f. & T.* ... „ 48
heteroclita, Roxb. ... ... „ 45
Heyneana, Wall. ... ... „ 77
Heyneana, W. & A. ... ... „ 51

Uvaria Vol. Page
hirsuta, *Jack* ... ... i. 48
javana, Dun. ... ... „ 48
lanuginosa, Wall. ... ... „ 79
latifolia, Bl. ... ... „ 79
Lobbiana, *Hk. f. & T.* ... „ 49
longifolia, Lamk. ... ... „ 62
lurida, *Hk. f. & T.* ... ... „ 50
lutea, Roxb. ... ... „ 89
lutea, Wall. ... ... i. 51, 77, 89
mabiformis, Griff. ... ... i. 82
macrophylla, *Roxb.* ... ... „ 49
macropoda, *Hk. f. & T.* ... „ 50
manubriata, Wall. ... ... „ 79
micrantha, *Hk. f. & T.* ... , 51
mollis, Wall. ... ... „ 58
Narum, *Wall.* ... ... „ 50
nervosa, Wall. ... ... „ 79
nutans, Wall. ... ... „ 72
obovata, Heyne ... ... „ 75
obtusa, Bl. ... ... „ 76
odorata, Lamk. ... ... „ 56
odoratissima, Roxb. ... ... „ 54
ophthalmica, Roxb. ... ... „ 72
ovalifolia, Bl. ... ... „ 49
oxyantha, Wall. ... ... „ 83
parviflora, *Hk. f. & T.* ... „ 51
pauciovulata, *Hk. f. & T.* „ 51
polyantha, Wall. ... ... „ 81
prismatica, Wall. ... ... „ 81
ptychocalyx, *Miq.* ... ... „ 49
purpurea, *Bl.* ... ... „ 47
reticulata, Bl. ... ... „ 77
Roxburghiana, Wall ... „ 71
rubiginosa, A. DC. ... ... „ 79
Russellii, Wall. ... ... „ 89
sclerocarpa, A. DC. ... ... i. 52, 88
semecarpifolia, *Hk. f. & T.* i. 49
sphærocarpa, Bl. ... ... „ 80
sphenocarpa, *Hk. f. & T.* „ 48
suberosa, Roxb. ... ... „ 65
subrepanda, *Wall.* ... ... „ 50
sumatrana, *Hk. f. & T.* ... „ 51
tomentosa, Roxb. ... ... „ 88
trichomalla, Bl. ... ... „ 48
tripetala, Roxb. ... ... „ 72
velutina, Dun. ... ... „ 87
ventricosa, Roxb. ... ... „ 89
villosa, Roxb. ... ... „ 87
virgata, Bl. ... ... „ 57
zeylanica, *Linn.* ... ... „ 51
sp., Griff. ... ... „ 75
UVARIEÆ ... ... i. 46
Uvularia Betua, Ham. ... vi. 359
calcarata, Wall. ... ... „ 359
chinensis, Ker ... ... „ 360
Hamiltoniana, Wall. vi. 359, 360
Leschenaultiana, Wall. ... vi. 360

Uvularia Vol. Page
multiflora, Reinw. ... ... vi. 360
parviflora, Wall. ... ... „ 360
umbellata, Wall. ... ... „ 360
UVULARIEÆ ... ... vi. 301

VACCINIACEÆ ... . iii. 442
Vaccinioid, Griff. ... ... iii. 447, 459
Vaccinium, *Linn.* ... ... iii. 451
acuminatum, Kurz ... ... „ 455
affine, Wight ... ... „ 453
arbutoides, *Clarke* ... ... „ 453
ardisioides, *Hk. f.* ... ... „ 452
auriculatum, Kurz ... ... „ 444
bancanum, *Miq.* ... ... „ 454
bracteatum, Thunb.... ... „ 454
campanulatum, Kurz ... „ 449
chinense, Champ. ... ... „ 455
Donianum, *Wight* ... ... „ 453
Dunalianum, *Wight* ... „ 453
exaristatum, Kurz ... ... „ 454
glauco-album, *Hk. f.* ... „ 453
Griffithianum, *Wight* ... „ 454
gualtheriæfolium, *Hk. f.* „ 453
hirsutum, Wight ... .. „ 443
Leschenaultii, *Wight* ... „ 455
loranthiflorum, DC. ... ... „ 446
macrostemon, Kurz ... ... „ 443
malaccense, *Wight* ... ... „ 454
microphyllum, Bl. ... ... „ 458
miniatum, Kurz .. ... „ 445
nilgherrense, *Wight* ... „ 454
Nummularia, *Hk. f. & T.* „ 451
obovatum, Wight ... ... „ 447
odontocerum, Kurz ... ... „ 447
odontocerum, Wight ... „ 446
pumilum, *Kurz* ... ... „ 451
retusum, *Hk. f.* ... ... „ 451
rotundifolium, Wight ... „ 455
Roylei, Kurz ... ... „ 443
salignum, Hk. f. ... ... „ 444
serpens, Wight ... ... „ 449
serratum, *Wight* ... „ 452
sikkimense, *Clarke* ... ... „ 451
Sprengelii, Wall. ... ... „ 447
variegatum, Kurz ... ... „ 446
venosum, *Wight* ... „ 452
verticillatum, Wight ... „ 443
Wallichianum, Wight ... „ 443
Vachellia Farnesiana, W. & A. ii. 292
? *Vahea gummifera*, Poir. ... iii. 657
Vablia, *Thunb.* ... ... ii. 399
Oldenlandiæ, DC. ... ... „ 399
oldenlandioides, *Roxb.* ... „ 399
sessiliflora, Wall. ... ... „ 399
silenoides, DC. ... ... „ 399
viscosa, *Roxb.* ... ... „ 399
Weldenii, Rchb. ... ... „ 399

Vol. Page
Valeriana, *Linn.* ... ... iii. 211
acuminata, Royle ... ... ,, 213
? *alternifolia*, Wall. ... ... iv. 291
aquatica, Schldl. ... ... iii. 214
Arnottiana, Wight ... ... ,, 213
Beddomei, *Clarke* ... ,, 214
bracteata, Royle ... ... ,, 212
Brunoniana, W. & A. ... ,, 214
Brunoniana, Wall. ... ... iv. 291
chinensis, Burm. ... ... ,, 709
dioica, *Linn.* ... ... iii. 211
dubia, Bunge ... ... ,, 211
elata, D. Don ... ... ,, 213
elegans, *Clarke* ... ... ,, 212
Hardwickiana, R. & S. ... ,, 213
Hardwickii, *Wall.* ... ... ,, 213
Hardwickii, Thw. ... ... ,, 213
Hoffmeisteri, Klotz. ... ... ,, 213
Hookeriana, *W. & A.* ... ,, 214
Jaeschkei, *Clarke* ... ... ,, 212
Jatamansi, Jones .. ... ,, 213
Jatamansi, Wall. ... ... ,, 211
javanica, Bl. ... ... ,, 213
Leschenaultii, *DC.* ... ... ,, 214
? *Lindleyana*, Wall. ... ... iv. 290
microphylla, Bedd. ... ... iii. 214
Moonii, *Arn.* ... ... ,, 213
officinalis, *Linn.* ... ... ,, 211
oligantha, Boiss. ... ... ,, 212
pusilla, Royle ... ... ,, 211
pyrolæfolia, *Dcne.* ... ... ,, 212
Roylei, *Klotz.* ... ... ,, 212
Spica, Vahl ... ... ,, 213
Stracheyi, *Clarke* ... ... ,, 212
tenera, Wall. ... ... ,, 213
villosa, Moon ... ... ,, 213
villosa, Wall. ... ... ,, 213
Wallichii, *DC.* ... ... ,, 213
sp., Hk. f. & T. ... iii. 212, 213
VALERIANEÆ ... ... iii. 210
Valerianella, *Moench.* ... ... iii. 214
Aucheri, Boiss. ... ... ,, 215
dentata, *Poll.* ... ... ,, 214
microcarpa, Lois. ... ... ,, 214
Morisonii, DC. ... ... ,, 214
Szovitziana, *Fisch. & Mey.* ,, 214
Vallaris, *Burm.* ... ... iii. 650
? anceps, *Wall.* ... ... ,, 652
assamensis (*assamica*), Griff. ,, 652
controversa, Spreng. ... iv. 216
dichotoma, Wall. ... ... iii. 650
Heynei, *Spreng.* ... ... ,, 650
lancifolia, *Hk. f.* ... ... ,, 651
laxiflora, Bl. ... ... ,, 652
Maingayi, *Hk. f.* ... ... ,, 651
ovalis, Miq. ... ... ,, 651
Pergulana, *Burm.* ... ... ,, 651

Vol. Page
Vallisneria, *Linn.* ... ... v. 660
alternifolia, Roxb. ... ... ,, 659
octandra, Roxb. ... ... ,, 660
spiralis, *Linn.* ... . ,, 660
spiraloides, Roxb. ... ... ,, 660
verticillata, Roxb. ... ... ,, 659
VALLISNERIEÆ ... ... v. 658
Vanda, *Br.* ... ... vi. 49, 178
alpina, *Lindl.* ... ... vi. 53
Bensoni, *Batem.* ... ... ,, 51
bicaudata, Thw. ... ... ,, 26
bicolor, *Griff.* ... ... ,, 52
brunnea, *Rchb. f.* ... ... ,, 54
Cathcarti, Lindl. ... ... ,, 27
cærulea, *Griff.* ... ... ,, 51
cærulescens, *Griff.* ... .. ,, 50
cærulescens, Lindl. ... ... ,, 51
concolor, Bl. ... ... ,, 53
congesta, Lindl. ... ... ,, 63
cristata, *Lindl.* ... ... ,, 53
Denisoniana, *Bens. & Rchb. f.* ,, 51
densiflora, *Lindl.* ... ... ,, 53
fasciata, Gardn. ... ... ,, 62
fimbriata, Gardn. ... ... ,, 62
fusco-viridis, Lindl. ... ... ,, 54
gigantea, Lindl. ... ... ,, 27
Griffithii, Lindl. ... .. ,, 53
Hookeriana, *Rchb. f.* ... ,, 50
Lindleyana, Griff. ... ... ,, 27
longifolia, Lindl. ... ... ,, 62
multiflora, Lindl. ... ... ,, 62
obliqua, Wall. ... ... ,, 61
Parishii, *Veitch & Rchb. f.* ,, 51
parviflora, *Lindl* ... ... ,, 50
peduncularis, Lindl. ... ... ,, 26
pulchella, Wight ... ... ,, 60
pumila, *Hk. f.* .. .. ,, 53
Roxburghii, *Br.* ... ... ,, 52
spathulata, *Spreng.* ... vi. 50, 198
Stangeana, *Rchb. f.* ... ... ,, 54
striata, Rchb. f. ... ,, 53
teres, *Lindl.* ... ... ,, 49
tesselloides, Rchb. f. ... ,, 52
testacea, Rchb. f. ... ... ,, 50
? *trichorhiza*, Hook. ... ... ,, 23
tristis, Par. ... ... ,, 54
undulata, Lindl. ... ... ,, 27
Vipani, *Rchb. f.* ... ... ,, 54
Wightiana, Lindl. ... ... ,, 62
Wightii, *Rchb. f.* ... ... ,, 54
sp., Griff. ... ... ,, 51
sp., Jones ... ... ,, 52
VANDEÆ ... ... v. 668, 671, vi. 1
Vandellia, *Linn.* ... ... iv. 279
alba, Benth. ... ... ,, 279
angustifolia, *Benth.* ... ,, 282
cordifolia, G. Don ... ... ,, 282

Vandellia Vol. Page
crustacea, *Benth.* ... ... iv. 279
elata, *Benth.* ... ... „ 280
erecta, *Benth.* ... ... „ 281
erecta, Benth. ... ... „ 280
hirsuta, *Benth.* ... ... „ 280
Hookeri, *Clarke* ... ... „ 280
laxa, Benth. ... ... „ 281
minima, Benth. ... ... „ 282
mollis, *Benth.* ... ... „ 281
molluginoides, *Benth.* ... „ 279
monnierioides, Ham. ... „ 281
multiflora, *G. Don* ... ... „ 280
multiflora, Hk. f. & T. ... „ 280
nummularifolia, *D. Don* ... „ 282
obovata, Walp. ... ... „ 259
pedunculata, *Benth.* ... „ 282
pyxidaria, Maxim. ... ... „ 281
Roxburghii, G. Don ... ... „ 282
scabra, *Benth.* ... ... „ 281
sessiliflora, *Benth.* ... ... „ 282
Vangueria, *Juss.* ... ... iii. 136
? *atroviridis*, Wall. ... ... „ 133
edulis, Miq. ... ... „ 136
edulis, Vahl ... ... „ 136
lucidula, Miq. ... ... „ 132
mollis, Wall. ... ... „ 136
? *palembanica*, Miq. ... „ 123
pubescens, Kurz ... ... „ 136
spinosa, *Roxb.* ... ... „ 136
spinosa, Kurz ... ... „ 136
spinosa, Roxb. ... ... , 136
spirostylis, Miq. ... ... „ 132
VANGUEIREÆ ... ... iii. 20, 131
Vanilla, *Sw.* ... ... vi. 90
albida, *Bl.* ... ... „ 91
aphylla, *Bl.* ? ... ... „ 91
aphylla, Lindl. ... ... „ 90
Griffithii, Rchb. f. ... ... „ 91
Moonii, *Thw.* ... ... „ 90
Parishii, *Rchb. f.* ... ... „ 90
pterosperma, Lindl. ... ... „ 89
rubiginosa, Griff. ... ... „ 89
Walkeriæ, *Wight* ... ... „ 90
Wightiana, *Lindl.* ... ... „ 90
sp., Griff. ... ... „ 91
sp., Wall. ... ... „ 91
Vareca heteroclita, Roxb. ... i. 186
lanceolata, Roxb. ... ... „ 188
Varinga repens, Rumph. ... v. 500
Vateria, *Linn.* ... ... i. 313
acuminata, *Heyne* ... ... „ 313
acuminata, Thw. ... ... „ 314
affinis, *Thw.* ... ... „ 314
canaliculata, *Thw.* ... ... „ 315
ceylanica, *Wight* ... ... „ 314
cordifolia, Thw. lapsu *Vatica cordifolia* ... ... i. 303, 317

Vateria Vol. Page
disticha, Thw. ... ... i. 303
elegans, Thw. ... ... „ 317
Gardneri, *Thw.* ... ... „ 314
indica, *Linn.* ... ... „ 313
indica, Thw. ... ... „ 313
jucunda, *Thw.* ... ... „ 314
lanceæfolia, Roxb. ... ... „ 302
lanceolaria, Roxb. ... ... „ 302
lanceolata, *Thw.* ... ... „ 315
lanceolata, Roxb. ... ... „ 302
lancifolia, Thw. ... ... „ 316
malabarica, Bl. ... ... „ 313
Moonii, *Thw.* ... ... „ 316
nitida, *Thw.* ... ... „ 316
oblongifolia, *Thw.* ... ... „ 315
petiolaris, *Thw.* ... ... „ 315
reticulata, *Thw.* ... ... „ 316
rigida, *Thw.* ... ... „ 315
Roxburghiana, Wight ... „ 302
scabriuscula, Thw. ... ... „ 303
Wightii, Thw. ... ... „ 314
Vatica, *Linn.* ... ... i. 301
acuminata, A. DC. ... ... „ 314
affinis, *Thw.* ... ... „ 303
Canaca, Ham. ... ... „ 302
canaliculata, A. DC. ... „ 315
chinensis, Linn ... ... „ 302
? cordifolia, *Thw.* vide *Vateria cordifolia* ... ... i. 303
? disticha, *A. DC.* ... ... „ 303
faginea, *Dyer* ... ... „ 301
Gardneri, A. DC. ... ... „ 314
grandiflora, *Dyer* .. ... „ 301
Helferi, *Dyer* ... ... „ 302
laccifera, W. & A. ... ... „ 305
lanceæfolia, *Bl.* ... ... „ 302
lanceolata, A. DC. ... ... „ 315
Maingayi, *Dyer* ... ... „ 302
Moonii, A. DC. ... ... „ 316
nitida, A. DC. ... ... „ 316
oblonga, A. DC. ... ... „ 315
obtusa, Steud. ... ... „ 306
pallida, *Dyer* ... ... „ 302
petiolaris, A. DC. ... ... „ 315
reticulata, A. DC. ... ... „ 316
rigida, A. DC. . ... „ 315
robusta, Steud ... ... „ 306
Roxburghiana, *Bl.* ... ... „ 302
scabriuscula, *A. DC.* ... „ 303
Scaphula, *Dyer* ... ... „ 301
Thwaitesii, A. DC. ... ... „ 314
Tumbuggaia, W. & A. ... „ 306
Wightii, A. DC. ... ... „ 314
Velaga globosa, Gaertn. ... ii. 575
xylocarpa, Gærtn. ... ... i. 369
VENTILAGINEÆ ... ... i. 630
Ventilago, *Gærtn.* ... ... i. 630

Ventilago Vol. Page
  bombaiensis, *Dalz.* ... ... i. 631
  bracteata, Wall. ... ... „ 631
  calyculata, *Tulasne* ... ... „ 631
  denticulata, Willd. .. ... „ 631
  leiocarpa, *Benth.* ... ... „ 631
  macrantha, Tulasne ... ... „ 631
  madraspatana, *Gærtn.* ... „ 631
  madraspatana, Benth. ... „ 631
  madraspatana, Roxb. ... „ 631
  Maingayi, *Laws.* ... ... „ 631
  silhetiana, Tulasne ... ... „ 631
  Smithiana, Tulasne ... ... „ 631
  sulphurea, Tulasne ... ... „ 631
  sp., Griff. ... ... „ 631
Veratronia malayana, Miq. vi. 391
Veratrum ? malayanum, Jack vi. 391
VERBASCEÆ ... ... iv. 246, 250
Verbascum, *Linn.* ... ... iv. 250
  ? Blattaria, Schm. ... ... „ 250
  celsioides, *Benth.* ... ... „ 250
  cuspidatum, Schrad. ... „ 250
  indicum, Wall. ... . „ 250
  thapsiforme, Schrad. ... „ 250
  Thapsus, *Linn.* ... ... „ 250
  virgatum, With. ... ... „ 250
Verbena, *Linn.* ... ... iv. 565
  bonariensis, Linn. ... ... „ 565
  capitata, Forsk. ... ... „ 563
  hyderabadensis, Heyne ... „ 564
  indica, Linn. ... ... „ 565
  jamaicensis, Linn. ... ... „ 565
  nodiflora, Linn. ... ... „ 563
  officinalis, *Linn.* ... ... „ 565
  sororia, D. Don ... ... „ 566
  spuria, Linn. ... ... „ 566
Verbenacea, Nees... ... ... iv. 495
Verbenacea, Wall. ... ... iv. 591
VERBENACEÆ ... ... iv. 560
VERBENEÆ ... ... iv. 560
Verbesina Acmella, Linn. ... iii. 307
  alba, Linn. ... ... „ 304
  biflora, Linn. ... ... „ 306
  ? biflora, Roxb. ... ... „ 307
  biflora, Wall. ... ... iii. 306, 307
  Bosvallia, Linn. f. ... ... iii. 308
  Boswellia, Roxb. ... ... „ 308
  calendulacea, Linn. ... ... „ 306
  dichotoma, Wall. ... iii. 305, 306
  Lavenia, Linn. ... ... iii. 243
  Lavenia, Roxb. ... ... „ 305
  nodiflora, Linn. ... ... „ 308
  prostrata, Linn. ... ... „ 304
  Pseudo-acmella, Linn. ... „ 307
  sativa, Roxb. ... ... „ 308
  scaberrima, Wall. lapsu Wedelia ... ... iii. 307
Vernonia, *Schreb.* ... ... iii. 229

Vernonia Vol. Page
  abbreviata, DC. ... ... iii. 234
  acuminata, DC. ... ... „ 240
  albicans, DC. ... ... iii. 234, 235
  anceps, *Clarke* ... ... iii. 233
  Andersoni, *Clarke* ... ... „ 241
  anthelmintica, *Willd.* ... „ 236
  arborea, *Ham.* ... ... „ 239
  Arnottiana, Thoms. ... ... „ 238
  aspera, DC. ... ... „ 233
  aspera, Ham. ... ... „ 234
  aspera, Less. ... ... „ 234
  attenuata, *DC.* ... ... „ 231
  Beddomei, *Hk. f.* ... ... „ 231
  blanda, *DC.* ... ... „ 241
  blandula, Clarke ... ... „ 241
  Blumeana, DC. ... ... „ 239
  bracteata, *Wall.* ... ... „ 232
  bracteolata, DC. ... ... „ 230
  calycina, *Wall.* .. .. „ 236
  Candolleana, *W. & A.* ... „ 236
  celebica, DC. ... ... „ 239
  chinensis, *Less.* ... ... „ 235
  cinerascens, *Sch.* ... ... „ 237
  cinerea, *Less.* ... ... „ 233
  clivorum, *Hance* ... ... „ 232
  conyzoides, DC. ... ... „ 234
  conyzoides, Thw. ... ... „ 236
  conyzoides, Wight ... ... „ 236
  Cumingiana, Benth. ... ... „ 241
  cuspidata, Buek. ... ... „ 240
  cyanonioides, Walp. ... ... „ 234
  dindigulensis, DC. ... ... „ 236
  divergens, *Benth.* ... ... „ 234
  elæagnifolia, *DC.* ... ... „ 237
  elliptica, DC. ... ... „ 237
  erigeroides, DC. ... ... „ 234
  extensa, *DC.* ... ... „ 238
  fasciculata, Reinw. ... ... „ 234
  Gardneri, *Thw.* ... ... „ 230
  Gardneri, Thw. ... ... „ 231
  Helferi, *Hk. f.* ... ... „ 231
  Hookeriana, *Arn.* ... ... „ 235
  indica, *Clarke* ... ... „ 238
  javanica, DC. ... ... „ 239
  juncea, Kurz ... ... „ 231
  Kingii, Clarke ... ... „ 232
  Kurzii, Clarke ... ... „ 240
  laxiflora, Less. ... ... „ 234
  leptophylla, DC. ... ... „ 234
  linifolia, Reinw. ... ... „ 234
  Lobbii, *Hk. f.* ... ... „ 231
  lobelioides, Wall. ... ... „ 388
  longicaulis, DC. ... ... „ 235
  malabarica, *Hk. f.* ... ... „ 230
  Metziana, Schultz ... ... „ 234
  monosis, DC. ... ... „ 239
  montana, Edgew. ... ... „ 234

Vernonia Vol. Page
multiflora, DC. ... ... iii. 234
neilgheryensis, Thw. ... „ 235
nemoralis, *Thw.* ... ... „ 237
nilgheryensis, DC. ... ... „ 234
oligocephala, Edgew. ... „ 233
Parishii, *Hk f.* ... ... „ 240
parviflora, Reinw. ... ... „ 234
pectiniformis, *DC.* ... ... „ 239
peguensis, *Clarke* ... ... „ 232
peninsularis, *Clarke* ... „ 233
physalifolia, DC. ... ... „ 234
puncticulata, DC. ... ... „ 239
punduana, DC. ... ... „ 240
revoluta, *Ham.* ... ... „ 233
rhomboidea, Edgew. ... „ 234
rigiophylla, DC. ... ... „ 230
riparia, Wall. ... ... „ 230
Roxburghii, *Less.* ... ... „ 232
saligna, *DC.* ... ... „ 235
salviæfolia, *Wight* ... ... „ 237
scandens, *DC.* ... ... „ 241
scariosa, *Arn.* ... ... „ 236
setigera, *Arn.* ... ... „ 235
solanifolia, *Benth.* ... ... „ 240
spathulata, Hochst. ... ... „ 237
squarrosa, Less. ... ... „ 230
subsessilis, *DC.* ... ... „ 230
talaumifolia, *Hk. f. & T.* „ 240
teres, *Wall.* ... ... „ 229
Thomsoni, *Hk. f.* ... ... „ 232
Thwaitesii, *Clarke* ... ... „ 231
travancorica, *Hk. f.* ... „ 240
vagans, DC. ... ... „ 241
volkameriæfolia, *DC.* ... „ 240
volkameriæfolia, Bedd. ... „ 240
volkameriæfolia, Steetz, vide *punduana* ... . „ 240
vulgaris, Steetz, vide *punduana* ... ... „ 240
Wightiana, *Arn.* ... ... „ 238
Wightiana, Wall. ... ... „ 271
zeylanica, *Less.* ... ... „ 238
Zollingeriana, Sch. ... ... „ 234
Vernoniacea, Griff. ... ... iii. 253
VERNONIEÆ ... ... iii. 220, 226
Veronica, *Linn.* ... ... iv. 291
agrestis, *Linn.* ... ... „ 294
Anagallis, *Linn.* ... ... „ 293
argute-serrata, Regel & Schmalk. ... ... „ 295
arvensis, *Linn.* ... ... „ 296
bartsiæfolia, Boiss. ... ... „ 295
Beccabunga, *Linn.* ... ... „ 293
biloba, *Linn.* ... ... „ 294
Brunoniana, Wall. ... ... „ 291
Buxbaumii, Ten. ... ... „ 294
campylopoda, Boiss. ... „ 294

Veronica Vol. Page
cana, *Wall.* ... ... iv. 295
capitata, *Benth.* ... ... „ 295
cardiocarpa, Walp. ... ... „ 295
ciliata, *Fisch.* ... ... „ 292
deltigera, *Wall.* ... ... „ 292
elbrusensis, Boiss. ... ... „ 295
grandiflora, Wall. ... ... „ 292
Griffithii, Benth. ... ... „ 295
hederæfolia, *Linn.* ... ... „ 294
himalensis, *D. Don* ... ... „ 292
javanica, *Bl.* ... ... „ 296
lanosa, Benth. ... ... „ 292
lanuginosa, *Benth.* ... ... „ 293
laxa, *Benth.* ... ... „ 295
Lindleyana, Wall. ... ... „ 290
? macrostemon, *Bunge* ... „ 292
Maddeni, Edgew. ... ... „ 296
microtheca, Boiss. & Bal. „ 295
oxycarpa, Boiss. ... ... „ 293
persica, *Poir.* ... ... „ 294
polita, Fries ... ... „ 294
punctata, Ham. ... ... „ 293
pusilla, Benth. ... ... „ 293
rupestris, Aitch. & Hemsl. „ 292
scrophularioides, Wall. ... „ 295
serpyllifolia, *Linn.* ... ... „ 296
Thunbergii, A. Gray ... „ 295
? *thyrsiflora*, Wall. ... ... „ 254
undulata, Wall. ... ... „ 293
verna, *Linn.* ... ... „ 296
sp., Griff. ... ... „ 293
Vetiveria, Hack. ... ... vii. 186
arundinacea, Griseb. ... „ 186
muricata, Griseb. ... ... „ 186
odorata, Virey ... ... „ 186
Viburnum, *Linn.* ... ... iii. 3
acuminatum, DC. ... ... „ 5
acuminatum, Wall. ... ... „ 5
atro-cyaneum, *Clarke* ... „ 7
capitellatum, Wight ... „ 6
Colebrookianum, *Wall.* ... „ 5
cordifolium, *Wall.* ... ... „ 6
coriaceum, *Bl.* ... ... „ 5
corylifolium, *Hk. f. & T.* ... „ 3
cotinifolium, *D. Don* ... „ 3
cylindricum, Ham. ... ... „ 6
erubescens, *Wall.* ... ... „ 7
fœtens, *Dcne.* ... ... „ 8
fœtidum, *Wall.* ... ... „ 4
furcatum, Bl. ... ... „ 6
grandiflorum, Wall. ... ... „ 8
Griffithianum, *Clarke* ... „ 4
hebanthum, *W. & A.* ... „ 6
hebanthum, Thw. ... ... „ 6
integerrimum, Wall. ... „ 5
involucratum, Wall. ... ... „ 4
involucratum, Hk. f. & T. „ 4

Viburnum Vol. Page
  Lantana, Linn. ... iii. 3
  lantanoides, Michx. ... „ 6
  lutescens, Bl. ... „ 5
  lutescens, Hk. f. & T. ... „ 5
  Mullaha, Ham. ... „ 4
  nervosum, *D. Don* ... „ 8
  odoratissimum, *Ker* ... „ 7
  polycarpum, Wall. ... „ 3
  premnaceum, Wall. ... „ 4
  pubigerum, W. & A. ... „ 7
  punctatum, *Ham.* ... „ 5
  sambucinum, *Reinw.* iii. 5, 671
  sambucinum, Reinw. ... iv. 581
  Simonsii, *Hk. f. & T.* ... iii. 7
  stellulatum, *Wall.* ... „ 4
  Wightianum, Hb. Hohen. „ 5
  Wightianum, Wall. ... „ 7
  zeylanicum, Gardn. ... „ 6
  sp., Griff. ... „ 4, 7
  sp., Wall. ... „ 7
Vicarya cristata, Wall. ... iv. 11
Vicatia, *DC.* ... ii. 670
  coniifolia, *DC.* ... „ 671
  millefolia, *Clarke* ... „ 671
  ? Stewartii, *Clarke* ... „ 671
Vicia, *Linn.* ... ii. 176
  angustifolia, Roth ... „ 178
  atropurpurea, Desv. ... „ 179
  Bobartii, Forst. ... „ 178
  benghalensis, Linn. ... „ 179
  Cracca, Benth. ... „ 177
  dumetorum, Benth. ... „ 178
  Faba, *Linn.* ... „ 179
  Griffithii, *Baker* ... „ 178
  hirsuta, *Koch* ... „ 177
  mollis, *Benth.* ... „ 177
  narbonensis, *Linn.* ... „ 179
  pallida, *Turcz.* ... „ 178
  pallida, Jacquem. ... „ 178
  peregrina, *Linn.* ... „ 178
  rigidula, *Royle* ... „ 178
  sativa, *Linn.* ... „ 178
  sepium, *Linn.* ... „ 179
  sylvatica, Benth. ... „ 178
  tenera, *Grah.* ... „ 177
  tenuifolia, *Roth* ... „ 177
  tetrasperma, *Mœnch* ... „ 177
VICIEÆ ... ii. 58
Vicoa, *Cass.* ... iii. 297
  appendiculata, DC. ... „ 297
  auriculata, *Cass.* ... „ 297
  aurita, DC. ... „ 297
  cernua, *Dalz.* ... „ 297
  indica, DC. ... „ 297
  vestita, *Benth.* ... „ 297
Vigna, *Savi* ... ii. 204
  anomala, Walp. ... „ 205

Vigna Vol. Page
  brachycarpa, *Kurz* ... ii. 206
  carinalis, Benth. ... „ 206
  Catiang, *Endl.* ... „ 205
  dolichoides, *Baker* ... „ 206
  glabra, Savi ... „ 205
  lucens, *Baker* ... „ 207
  lutea, *A. Gray* ... „ 205
  luteola, *Benth.* ... „ 205
  opisotricha, A. Rich. ... „ 203
  pilosa, *Baker* ... „ 207
  repens, *Baker* ... „ 205
  retusa, Walp. ... „ 205
  sinensis, Endl. ... „ 205
  vexillata, *Benth.* ... „ 206
  villosa, Savi ... „ 205
  Wightii, *Benth.* ... „ 206
Vignea, Beauv. ... vi. 700
  canescens, Rchb. ... „ 706
  divulsa, Rchb. ... „ 703
  incurva, Rchb. ... „ 700
  muricata, Rchb. ... „ 703
  remota, Rchb. ... „ 706
  stenophylla, Rchb. ... „ 701
Vilfa arabica, Steud. ... vii. 252
  barbata, Beauv. ... „ 249
  capensis, Beauv. ... „ 248
  capillaris, W. & A. ... „ 248
  ciliata, Presl ... „ 251
  commutata, Trin. ... „ 253
  coromandeliana, Beauv. ... „ 253
  diandra, Trin. ... „ 251
  diandra, Wight ... „ 247
  discospora, Trin. ... „ 253
  elongata, Beauv. ... „ 248
  erosa, Trin. ... „ 247
  exilis, Trin. ... „ 248
  geniculata, Nees ... „ 250
  glaucifolia, Steud. ... „ 250
  indica, Trin. ... „ 248
  ioclados, Nees ... „ 249
  littoralis, Beauv. ... „ 249
  mangalorica, Hochst. ... „ 248
  minutiflora, Trin. ... „ 248
  murina, Sieb. ... „ 249
  orientalis, Nees ... „ 251
  orientalis, Wight ... vii. 249, 250
  pallida, Nees ... vii. 252
  pilifera, Trin. ... „ 251
  pulchella, Trin. ... „ 252
  Retzii, Steud. ... „ 247
  rigidifolia, Trin. ... „ 253
  Roxburghiana, Nees .. „ 253
  Roxburghii, Nees ... „ 253
  rupestris, Trin. ... „ 248
  scabrifolia, Hochst. ... „ 250
  setulosa, Trin. ... „ 236
  spicata, Beauv. ... „ 251

Vilfa Vol. Page
tenacissima, H. B. K. ... vii. 248
tenuissima, Schult. ... ... „ 248
tremula, Trin. ... ... „ 250
virginica, Beauv. ... ... „ 249
vulgaris, Wight ... ... „ 258
sp., Str. & Wint. ... ... „ 311
Villarsia cristata, Spreng. iv. 131
eglandulosa, Griff. ... ... „ 132
indica, Vent. ... ... „ 132
indica, Wall. ... ... „ 131
macrophylla, Wight ... ... „ 132
nymphæoides, Vent. ... „ 131
parvifolia, Wall. ... ... „ 132
Villebrunea, *Gaud.* ... ... v. 589
appendiculata, Wedd. ... „ 589
frutescens, *Bl.* ... ... „ 590
integrifolia, *Gaud.* ... ... „ 589
sylvatica, Bl. ... ... „ 590
Vinca, *Linn.* ... ... iii. 640
Gulielmi Waldemarii, Klotz. „ 640
parviflora, Retz. ... ... „ 640
pusilla, *Murr.* ... ... „ 640
rosea, *Linn.* ... ... „ 640
Vincetoxicum Arnottianum, Wight ... ... iv. 22
canescens, Dcne. ... ... „ 22
kenouriense, Dcne. ... ... „ 22
luridum, Stocks ... ... „ 22
montanum, Dcne. ... ...iv. 22, 40
officinale, Moench ... ... iv. 22
Viola, *Linn.* ... ... i. 182
acuminata, Led. ... ... „ 185
apetala, Roxb. ... ... „ 185
aspera, Ging. ... ... „ 184
biflora, *Linn.* ... ... „ 182
cæspitosa, D. Don ... ... „ 183
canescens, Wall. ... ... „ 184
canina, *Linn.* ... ... „ 185
chinensis, G. Don ... ... „ 183
cinerea, *Boiss.* ... ... „ 185
confusa, Benth. ... ... „ 184
diffusa, *Ging.* ... ... „ 183
distans, *Wall.* ... ... „ 183
dubia, Wall. ... ... „ 185
enneasperma, Roxb. ... ... „ 185
erecta, Roth ... ... „ 185
Falconeri, *Hk. f. & T.* ... „ 185
frutescens, Roth ... ... „ 185
grandifolia, Wall. ... ... „ 183
Griffithiana, Boiss. ... ... „ 184
? *Hamiltoniana*, D. Don ... „ 184
hirta, Linn. ... ... „ 184
Hookeri, *Thoms.* ... ... „ 183
kunawarensis, *Royle* ... „ 185
Metziana, Hohen. ... ... „ 184
mysorensis, Wall. ... ... „ 183
nilagirica, Turcz. ... ... „ 184
Viola Vol. Page
Notoniana, Wall. ... ... i. 184
odorata, *Linn.* ... ... „ 184
? *palmaris*, Buch. ... ... „ 184
Patrinii, *DC.* ... ... „ 183
pilosa, Bl. ... ... „ 184
primulifolia, Linn. ... ... „ 183
reniformis, Wall. ... ... „ 183
Royleana, Wall. ... ... „ 184
serpens, *Wall.* ... ... „ 184
serpens, Wall. ... ... „ 184
suffruticosa, Roxb. ... ... „ 185
sylvatica, *Fries* ... ... „ 185
tenuis, Benth. ... ... „ 183
tricolor, Linn. ... ... „ 182
Walkerii, Wight ... ... „ 183
Wallichiana, Ging. ... ... „ 183
Wightiana, Wall. ... ... „ 184
Wightiana, Wight ... . „ 184
VIOLACEÆ ... ... i. 182
VIOLEÆ ... ... i. 182
Virana, Jones ... ... vii. 186
Vireya, Bl. ... ... iii. 462
celebica, Bl. ... ... „ 463
javanica, Bl. ... ... „ 463
tubiflora, Bl. ... ... „ 463
Virgilia aurea, Lam. ... ... ii. 251
capensis, Lam. ... ... „ 251
Viscum, *Linn.* ... ... v. 223
album, *Linn.* ... ... „ 223
angulatum, *Heyne* ... ... „ 225
aphyllum, Griff. ... ... „ 226
articulatum, *Burm.* ... „ 226
articulatum, Brand. ... „ 226
articulatum, Miq. ... ... „ 226
attenuatum, DC. ... ... „ 226
attenuatum, Hohen. ... „ 225
benghalense, Roxb. ... ... „ 224
capitellatum, *Sm.* ... ... „ 225
compressum, Poir ... ... „ 226
? *confertum*, Roxb. ... ... „ 224
dichotomum, D. Don ... „ 226
elongatum, Wall. ... ... „ 226
falcatum, Wall ... ... „ 224
floccosum, Thw. ... ... „ 227
foliatum (error for *falcatum*) ... ... „ 224
fragile, Wall. ... ... „ 226
grossum, *Wight* ... ... „ 227
Helferi, Presl ... ... „ 228
? *heteranthum*, Wall. v. 227, 233
Heyneanum, DC. ... ... v. 224
indicum, Rottl. ... ... „ 224
japonicum, *Thunb.* ... ... „ 226
latifolium, Ham. ... v. 227, 233
mangiferæ, Wight ... ... v. 225
moniliforme, Bl. ... ... „ 226
moniliforme, Wight ... „ 226

Viscum Vol. Page
monoicum, *Roxb.* ... ... v. 224
monoicum ?, Wight ... ... „ 224
nepalense, Spreng. ... ... „ 226
obtusatum, Wall. ... ... „ 225
Opuntia, Thunb. ... ... „ 226
opuntioides, Roxb. ... ... „ 226
orbiculatum, *Wight* ... „ 224
orientale, *Willd.* ... ... „ 224
ovalifolium, *Wall.* ... ... „ 225
platyphyllum, Spreng. v. 227, 233
ramosissimum, *Wall.* ... v. 225
ramosissimum, Wight ... „ 225
spathulifolium, Thw. ... „ 228
stellatum, D. Don ... ... „ 223
tænioides, Comm. ... ... „ 226
verruculosum, *W. & A.* ... „ 224
verticillatum, Rottl. ... „ 225
verticillatum, Roxb. ... „ 224
Wallichianum, *W. & A.* „ 227
Wightianum, *W. & A.* ... „ 227
Wightianum, Wall. ... ... „ 226
sp Griff. ... ... „ 226
Visenia concatenata, Spreng. i. 374
corchorifolia, Spreng. ... „ 374
supina, Spreng. ... ... „ 374
tomentosa, Miq. ... . „ 374
umbellata, Wight ... ... „ 374
Visiania, DC. ... ... iii. 617
grandiflora, DC. ... ... „ 617
robusta, DC. ... ... „ 614
robusta, Wight ... ... „ 615
sumatrana, Miq. ... ... „ 614
Visiania, Gasp. ... ... v. 508
elastica, Gasp. ... ... „ 508
Vismia ? arborescens, Chois. i. 258
Vitex, *Linn.* ... ... iv. 583
Agnus castus, Kurz ... ... „ 583
alata, *Heyne* ... ... „ 584
alata, Roxb. ... ... „ 587
alata, Schau. ... ... „ 584
altissima, *Linn. f.* ... ... „ 584
altissima, Thw. ... ... „ 584
appendiculata, Rottl. ... „ 584
arborea, Desf. ... ... „ 583
arborea, Roxb. ... ... „ 585
? axillaris, Wall. ... ... „ 588
bicolor, Willd. ... ... „ 583
bombacifolia, Wall.... ... „ 588
canescens, *Kurz* ... ... „ 586
canescens, Wall. ... ... „ 586
coriacea, *Clarke* ... ... „ 586
Cunninghamii, Schau. ... „ 588
diversifolia, *Kurz* ... ... „ 585
Finlaysoniana, Wall. ... „ 587
gamosepala, *Griff.* ... ... „ 588
glabrata, *Br.* ... ... „ 588
Haynga, Roxb. ... ... „ 588

Vitex Vol. Page
heterophylla, *Roxb.* ... iv. 585
heterophylla, Kurz ... „ 585
heterophylla, Schau. ... „ 585
inæquifolia, Turcz. ... ... „ 585
incisa, Lamk. ... . „ 584
incisa, Wall. ... ... „ 583
involucratus, Presl .. ... „ 601
leucoxylon, *Linn. f.* ... „ 587
leucoxylon, Schau. ... ... „ 588
limonifolia, *Wall.* ... ... „ 584
Loureirii, Wight ... ... „ 585
macrophylla, Br. ... ... „ 587
Negundo, *Linn.* ... ... „ 583
ovata, Thunb. ... ... „ 583
pallida, Wall. ... ... „ 588
paniculata, Lamk. ... ... „ 584
peduncularis, *Wall.* ... „ 587
pubescens, *Vahl* ... ... „ 585
repens, Blanco ... ... „ 583
saligna, Roxb. ... ... „ 587
scabra, Wall. ... ... „ 588
sex-dentata, Wall. ... ... „ 597
simplicifolia, *Clarke* ... „ 586
sumatrana, Miq. ... ... „ 586
trifolia, *Linn. f.* ... ... „ 583
undulata, Wall. ... ... „ 585
urceolata, *Clarke* ... ... „ 585
vestita, *Wall.* ... ... „ 587
Wimberleyi, *Kurz* ... ... „ 586
zeylanica, Turcz ... ... „ 584
sp., Hk. f. & T. iv. 585, 586, 587, 588
? *Viticastrum racemosum*, Presl iv. 601
VITICEÆ... ... ... iv. 561
Vitis, *Linn.* ... ... i. 645
adnata, *Wall.* ... ... „ 649
anamallayana, *Bedd.* ... „ 656
angustifolia, *Wall.* ... ... „ 654
araneosa, *Dalz. & Gibs.* „ 657
assamica, *Laws.* ... ... „ 648
assimilis, Kurz ... ... „ 660
atroviridis, Wall. ... „ 663
auriculata, *Laws.* ... ... „ 658
barbata, *Wall.* ... ... „ 651
bracteolata, *Wall.* ... ... „ 654
campylocarpa, *Kurz* ... „ 657
canarensis, *Dalz* ... ... „ 655
cantoniensis, *Seem.* ... ... „ 663
capreolata, *D. Don* ... ... „ 659
carnosa, *Wall.* ... ... „ 654
cinnamomea, *Wall.* ... ... „ 659
cinnamomea, Wall. ... i. 650, 659
compositifolia, *Laws.* ... „ 659
coralloides, Hk. f. ... ... „ 659
cordifolia. Roth ... ... „ 651
? costata, Wall. ... ... „ 647
crenata, Wall. ... ... „ 654
diffusa, *Miq.* ... ... „ 646

Vitis Vol. Page
discolor, *Dalz.* ... i. 647
divaricata, *Wall.* ... „ 657
diversifolia, Wall. ... „ 647
dubia, *Laws.* ... „ 661
elegans, *Kurz* ... „ 659
elongata, *Wall.* ... „ 658
erioclada, *W. & A.* ... „ 651
erythroclada, Kurz ... „ 663
furcata, *Laws.* ... „ 646
Gardneri, *Laws.* ... „ 656
gigantea, *Bedd.* ... „ 648
glaberrima, *Wall.* ... „ 646
glaberrima, Wall. ... „ 645
glabrata, Heyne ... „ 652
glandulosa, *Wall.* ... „ 652
glauca, *W. & A.* ... „ 648
glauca, Wall. ... „ 646
glyptocarpa, *Laws.* ... „ 645
gracilis, *Wall.* ... „ 653
hederacea, Wall. ... i. 657, 659
Helferi, *Laws.* ... i. 662
heterophylla, Wall. ... „ 653
Heyneana, *Wall.* ... „ 647
Heyneana, DC. ... „ 651
himalayana, *Brand.* ... „ 655
Hookeri, *Laws.* ... „ 661
inæqualis, Wall. ... „ 647
indica, *Linn.* ... „ 653
indica, Ham. ... „ 651
indica, Thw. ... i. 651, 653
indica, Wall. ... i. 652
Kleinii, Wall. ... i. 648, 652
Labrusca, Linn. ... i. 651, 652
læta, Wall. ... i. 648
lanata, Roxb. ... i. 651, 652
lanata, *Roxb.* ... i. 651
lanata, Wall. ... „ 650
lanceolaria, *Laws.* ... „ 660
lanceolaria, Wall. ... „ 661
lanceolaria, Wight ... „ 661
latifolia, Ham. ... „ 651
latifolia, *Roxb.* ... „ 652
Linnæi, *Wall.* ... „ 649
lonchiphylla, *Laws.* ... „ 646
macrostachys, *Miq.* ... „ 650
mollis, *Wall.* ... „ 660
mollissima, *Wall.* ... „ 656
montana, *Laws.* ... „ 652
muricata, W. & A. ... „ 660
neilgherrensis, Wight ... „ 656
nervosa, *Laws.* ... „ 650
nitida, *Laws.* ... „ 662
novemfolia, *Wall.* ... „ 662
obovata, *Laws.* ... „ 658
obtecta, *Wall.* ... „ 657
pallida, *W. & A.* ... „ 647
paniculata, Heyne ... „ 660

Vitis Vol. Page
paniculata, Wall. ... i. 649
parvifolia, *Roxb.* ... „ 652
pedata, *Vahl* ... „ 661
pedicellata, *Laws.* ... „ 650
peduncularis, *Wall.* ... „ 655
pentagona, *Laws.* ... „ 646
pentagona, Ham. ... „ 651
planicaulis, *Hk. f.* ... „ 658
polystachya, *Wall.* ... „ 662
polystachya, Wall. ... „ 662
pterisantha, Miq. ... „ 664
? *Purani*, D. Don ... „ 652
quadrangularis, *Wall.* ... „ 645
repanda, *W. & A.* ... „ 648
repens, *W. & A.* ... „ 646
repens, Wall. ... „ 649
reticulata, *Laws.* ... „ 655
Rheedei, *W. & A.* ... „ 653
rosea, Royle ... „ 648
Roxburghii, *W. & A.* ... „ 655
rubifolia, *Wall.* ... „ 663
rugosa, Hk. f. & T. ... „ 650
rugosa, Wall. ... i. 651, 653
rumicisperma, *Laws.* ... i. 661
sagittifolia, *Laws.* ... „ 645
semicordata, Wall. ... „ 656
serratifolia, W. & A. ... „ 660
serrulata, Wall. ... „ 659
setosa, *Wall.* ... „ 654
sikkimensis, *Laws.* ... „ 650
spectabilis, *Kurz* ... „ 649
sulcata, *Laws.* ... „ 661
tenuifolia, *W. & A.* ... „ 660
ternata, Heyne ... „ 650
Thomsoni, *Laws.* ... „ 657
tomentosa, *Heyne* ... „ 650
trichophora, Wall. ... „ 663
trifida, Roth ... „ 650
trifolia, Linn. ... „ 654
triloba, Heyne ... „ 650
truncata, Miq. ... „ 652
tuberculata, *Laws.* ... „ 656
tuberculata, Wall. ... „ 661
vinifera, *Linn.* ... „ 652
vulpina, Linn. ... „ 652
Wallichii, DC. ... „ 652
Wallichii, Kurz ... „ 647
zeylanica, Russ. ... „ 652
sp., Wall. ... vi. 290
Vitmannia elliptica, Vahl ... i. 519
lucida, Steud. ... „ 519
Voandzeia subterranea, Thou.
lapsu *Voandezia* ... ii. 205
Vogelia, *Lamk.* ... iii. 481
arabica, Boiss. ... „ 481
indica, *Gibs.* ... „ 481
Volkameria alternifolia, Burm. iv. 591

Volkameria Vol. Page
  angulata, Lour. ... ... iv. 593
  dentata, Roxb. ... ... „ 593
  diversifolia, Vahl ... ... „ 593
  farinosa, Roxb. ... ... „ 592
  herbacea, Roxb. ... ... „ 592
  infortunata, Roxb. ... ... „ 594
  Kaempferi, Jacquem ... „ 593
  multiflora, Burm. ... ... „ 590
  neriifolia, Roxb. ... ... „ 589
  odorata, Roxb. ... ... „ 597
  serrata, Linn. ... ... „ 592
  urticifolia, Roxb. ... ... „ 594
  urticifolia, Wall. ... ... „ 594
  sp., Griff. ... ... iv. 592, 597
  sp., Linn. ... ... iv. 589
Volutarella, *Cass.* ... ... iii. 383
  divaricata, *Benth.* ... ... „ 383
Vossia, *Wall. & Griff.* ... vii. 151
  cuspidata, Griff. ... ... „ 151
  procera, *Wall. & Griff.* ... „ 151
  speciosa, Benth. ... ... „ 152
Vrydagzynea, *Bl.*... ... vi. 96, 179
  albida, *Bl.* ... ... vi. 97
  gracilis, *Bl.* ... ... „ 97
  viridiflora, *Hk. f.* ... ... „ 96
Vulpia Myuros, Gmel. ... vii. 356
  Pseudo-myuros, Rchb. ... „ 356
Vuta (error for *Vata*), As. Res. ... ... v. 499

Wagatea, *Dalz.* ... ... ii. 260
  spicata, *Dalz.* ... ... „ 261
Wahlenbergia, Br. ... ... i. 570
Wahlenbergia, *Schrad.* ... iii. 429
  agrestis, A. DC. ... ... „ 429
  dehiscens, A. DC. ... ... „ 429
  ? dicentrifolia, *Clarke* ... „ 430
  fragrans, Bl. ... . „ 103
  gracilis, *DC.* ... ... „ 429
  indica, A. DC. ... . „ 429
  lavandulæfolia, A. DC. ... „ 429
  marginata, A. DC. ... ... „ 429
  peduncularis, *Hk. f. & T.* „ 430
  perotifolia, W. & A. ... ... „ 428
  purpurea, A. DC. ... ... „ 432
  quadrifida, A. DC. ... ... „ 429
  rotundifolia, A. DC.... ... „ 432
  Roylei, DC. ... ... „ 433
  Sieberi, A. DC. ... ... „ 429
  thalictrifolia, DC. ... ... „ 432
  viridis, A. DC. ... ... „ 431
Wailesia paludosa, Rchb. f.... vi. 19
  picta, Lindl. ... ... „ 19
Waldemaria argentea, Klotz. iii. 464
Waldheimia tridactylites, Kar. & Kir. ... ... iii. 313
Walkera serrata, Willd. ... i. 525

Vol. Page
Wallichia, *Roxb.*... ... ... vi. 418
  caryotoides, *Roxb.* ... ... „ 419
  caryotoides, Wall. ... ... „ 419
  densiflora, *Mart.* ... ... „ 419
  disticha, *T. Anders.* ... „ 419
  nana, Griff. ... ... „ 420
  oblongifolia, Griff. ... ... „ 419
  Yomæ, Kurz ... ... „ 419
Wallichia, DC. ... ... i. 371
  spectabilis, DC. ... ... „ 371
Wallichia, Reinw. ... ... iii. 98
  arborea, Reinw. ... ... „ 98
Wallrothia articulata, Roth iv. 585
  leucoxylon, Roth ... ... „ 587
Walsura, *Roxb.* ... ... i. 563
  Gardneri, *Thw.* ... ... „ 563
  hypoleuca, *Kurz* ... ... „ 564
  ? *lanceolata*, Wall. ... ... „ 555
  neurodes, *Hiern* ... ... „ 564
  Piscidia, *Roxb.* ... ... „ 564
  pubescens, Kurz ... ... „ 565
  robusta, *Roxb.* ... ... i. 565, 690
  ternata, *Roxb.* ... ... i. 563
  trichostemon, Miq. ... ... „ 563
  tubulata, *Hiern* ... ... „ 563
  villosa, *Wall.* ... i. 563, 564, 674
  sp., Kurz ... ... i. 564
Waltheria, *Linn.* ... ... i. 374
  americana, Linn. ... ... „ 374
  elliptica, Cav. ... ... „ 374
  indica, *Linn.* ... ... „ 374
  microphylla, Miq. ... ... iv. 144
Warea, *Clarke* ... ... ii. 612
  tonglensis, *Clarke* ... ... „ 612
Wattakaka viridiflora, Hassk. iv. 46
Webera, *Schreb.* ... ... iii. 101
  asiatica, Bedd. ... ... „ 102
  attenuata, *Hk. f.* ... iii. 104, 153
  auriculata, Wall. ... ... iii. 108
  bispinosa, Kurz ... .. „ 111
  campaniflora, *Hk. f.* ... „ 106
  canarica, *Hk. f.* ... ... „ 106
  cerifera, Moon ... ... „ 102
  corymbosa, *Willd.* ... ... „ 102
  costata, *Hk. f.* ... ... „ 103
  densiflora, Wall. ... ... „ 112
  disperma, *Hk. f.* ... ... „ 102
  fasciculata, Kurz ... ... „ 109
  fragrans, *Hk. f.*... ... ... „ 103
  glomeriflora, Kurz ... ... „ 102
  grandifolia, *Hk. f.* ... ... „ 105
  Helferi, *Hk. f.* ... ... „ 107
  Kurzii, *Hk. f.* ... ... „ 105
  lanceolata, Moon ... ... „ 132
  longiflora, Kurz ... ... „ 111
  longifolia, *Hk. f.* ... ... „ 105
  lucens, *Hk. f.* ... ... „ 106

Webera ... Vol. Page
macrophylla, Roxb. ... iii. 35, 102
Maingayi, *Hk. f.* ... ... iii. 103
mollis, *Hk. f.* ... ... „ 104
monosperma, *Hk. f.* ... ... „ 103
? nilagirica, *Hk. f.* ... ... „ 106
odorata, *Roxb.* ... ... „ 102
oppositiflora, Roxb. ... ... „ 112
pumila, *Hk. f.* ... ... „ 103
scandens, Roxb. ... ... „ 111
siamensis, Kurz ... ... „ 111
stellaris, Hk. f. ... ... „ 153
stellulata, *Hk. f.* ... ... „ 104
tetrandra, Wall. ... ... „ 134
tetrandra, Willd. ... ... „ 136
thyrsoidea, Roth ... ... „ 40
truncata, Roxb. ... ... „ 94
Wallichii, *Hk. f.* ... ... „ 105
Websteria limnophila, Wright vi. 654
Wedelia, *Jacq.* ... ... iii. 306
bengalensis, ? Rich. ... ... „ 306
biflora, *DC.* ... ... „ 306
biflora, Clarke ... ... „ 307
? *biflora*, Kurz ... ... „ 30[illegible]
calendulacea, *Less.* ... ... „ 306
scaberrima, Wall. (vide Verbesina) ... ... „ 307
scandens, Clarke ... ... „ 306
urticæfolia, *DC.* ... ... „ 306
Wallichii, *Less.* .. ... „ 307
Weihea, *Spreng.* ... ... ii. 441
ceylanica, *Baill.* ... ... „ 441
Wellingtonia, Meissn. ... ii. 3
Wendlandia, *Bartl.* ... ... iii. 37
angustifolia, *Wight* ... ... „ 40
appendiculata, Wall. ... „ 38
biscuspidata, W. & A. ... „ 40
? *bifaria*, Wall. ... ... „ 98
budleoides, Wall. ... ... „ 38
cinerea, Wall. ... . „ 37
coriacea, *DC.* ... ... „ 39
? *corymbosa*, Wall. ... ... „ 41
exserta, *DC.* ... ... „ 37
glabrata, *DC.* ... ... „ 39
glomerulata, *Kurz* ... ... „ 40
Heyneana, Wall. ... ... „ 39
lævigata, Miq. ... ... „ 39
Lawii, *Hk. f.* ... ... „ 40
Lawsoniæ, DC. ... ... „ 56
ligustrina, *Wall.* ... ... „ 39
longifolia, DC. ... ... „ 95
luzoniensis, DC. ... ... „ 39
malayana, G. Don ... ... „ 95
nitens, *Wall.* ... ... „ 38
Notoniana, *Wall.* ... ... „ 40
paniculata, *DC.* ... ... „ 39
pendula, *DC.* ... ... „ 41
proxima, DC. ... ... „ 38
Wendlandia Vol. Page
puberula, *DC.* ... ... iii. 37
scabra, Kurz ... ... „ 38
secunda, Griff. .. .. „ 41
? *spicata*, DC. ... ... „ 41
sumatrana, Miq. ... ... „ 39
tenuiflora, Miq. ... ... „ 39
? *tetrandra*, DC. ... ... „ 54
tinctoria, *DC.* ... ... „ 38
Wallichii, *W. & A.* ... ... „ 38
? *Wightiana*, Wall. ... ... „ 41
Werneria, *H. B. K.* ... ... iii. 357
Ellisii, *Hk. f.* ... ... „ 357
nana, *Benth.* ... ... „ 357
Whitleya stramonifolia, Sweet iv. 213
Wightia, *Wall.* . ... .. iv. 257
gigantea, *Wall.* ... iv 257, 583
Wikstroemia, *Endl.* ... ... v. 195
canescens, *Meissn.* ... ... „ 195
Chamædaphne, Meissn. ... „ 195
? *hypericifolia*, Meissn. ... „ 196
inamœna, Meissn. ... ... „ 195
indica, *C. A. Mey.* ... ... „ 195
salicifolia, Dcne. ... ... „ 195
virgata, Meissn. ... ... „ 195
viridiflora, Meissn. ... ... „ 195
Wilhelmsia caucasica, C. Koch vii. 309
Willoughbeia, *Roxb.* ... ... iii. 623
Burbidgei, Dyer ... ... „ 624
ceylanica, *Thw.* ... ... „ 624
coriacea, *Wall.* ... ... „ 623
edulis, *Roxb.* ... ... „ 623
firma, *Bl.* ... ... „ 624
flavescens, *Dyer* ... ... „ 625
grandiflora, *Dyer* ... ... „ 625
martabanica, Wall. ... ... „ 624
oblonga, *Dyer* ... ... „ 625
rufescens, *Dyer* ... ... „ 626
tenuiflora, *Dyer* ... ... „ 625
Willughbeia, Spreng. ... ... iv. 83
auriculata, Spreng. ... „ 83
obovata, Spreng. ... ... „ 83
racemosa, Spreng. ... ... „ 84
Winchia, *A. DC.* .. .. iii. 630
atro-viridis, Kurz ... ... „ 626
calophylla, *A. DC.* ... ... „ 630
cirrhifera, Gardn. ... ... „ 624
WINTEREÆ ... ... i. 39
Winterlia uliginosa, Spreng. ii. 569
Wisneria, *Mich.* ... ... vi. 561
triandra, *Mich.* ... ... „ 562
Wissadula, *Medik.* ... ... i. 325
Leschenaultiana, *Mast.* ... „ 325
periplocifolia, Thw. ... ... „ 325
rostrata, *Planch.* ... ... „ 325
zeylanica, Medik. .. ... „ 325
Wisteria pallida, Dalz & Gibs. ii. 105
racemosa, Dalz. & Gibs. ... „ 105

Vol. Page
Withania, *Pauq.* ... iv. 239
coagulans, *Dunal* ... „ 240
somnifera, *Dunal* ... „ 239
Wolffia, *Horkel* ... vi. 557
arrhiza, *Wimm.* ... „ 557
Delilii, Kurz ... „ 557
Michelii, Schleid. ... „ 557
microscopica, *Kurz* ... „ 558
Woodfordia, *Salisb.* ... ii. 572
floribunda, *Salisb.* ... „ 572
fruticosa, Kurz ... „ 572
tomentosa, Bedd. ... „ 572
Woodrowia, *Stapf* ... vii. 241, 421
diandra, *Stapf* ... vii. 241
Woollastonia biflora, Dalz. & Gibs. ... iii. 306
biflora, DC. ... „ 306
biflora, Wight ... „ 306
scabriuscula, DC. ... „ 306
Wormia, *Rottb.* ... i. 35
bracteata, Hk. f. & T. ... „ 37
dentata, DC. ... „ 35
excelsa, Hk. f. & T. ... „ 35
excelsa, Jack ... „ 35
hamata, Vahl ... „ 299
integra, Hk. f. & T. ... „ 37
oblonga, *Wall.* ... „ 35
pulchella, *Jack* ... „ 36
subsessilis, Miq. ... „ 35
suffruticosa, *Griff.* ... „ 35
triquetra, *Rottb.* ... „ 35
Wrightea, Roxb. ... vi. 419
caryotoides, Roxb. ... „ 419
Wrightia, *Br.* ... iii. 652
angustifolia, *Thw.* ... „ 653
antidysenterica, Br. ... „ 654
antidysenterica, Grah. ... „ 644
coccinea, *Sims* ... „ 654
Coraia, Wall. ... „ 653
Hamiltoniana, Wall. ... „ 653
lævis, *Hk. f.* ... „ 654
mollissima, Wall. ... „ 653
religiosa, Benth. ... „ 653
Rothii, G. Don ... „ 653
tinctoria, *Br.* ... „ 653
tinctoria, Roth ... „ 653
tomentosa, *R. & S.* ... „ 653
Wallichii, A. DC. ... „ 653
zeylanica, *Br.* ... „ 654
Wulfenia, *Jacq.* ... iv. 290, 734
Amherstiana, *Benth.* ... iv. 291
intermedia, Wall. ... „ 367
Notoniana, Wall. ... „ 366
obliqua, Wall. ... „ 367
Wurfbainia, Giseke ... vi. 241

Xanthium, *Linn.* ... iii. 303
Xanthium Vol. Page
brevirostre, Wallroth ... iii. 303
discolor, Wallroth ... „ 303
indicum, DC. ... „ 303
orientale, Bl. ... „ 303
Roxburghii, Wallroth ... „ 303
Strumarium, *Linn.* ... „ 303
Xanthochymus, Roxb. ... i. 269
dulcis, Roxb. ... „ 269
ovalifolius, ? Bedd. ... „ 269
ovalifolius, Roxb. ... „ 269
pictorius, Roxb. ... „ 269
tinctorius, DC. ... „ 269
spicatus, W. & A. ... „ 269
XANTHOPHYLLUM, *Roxb.* ... i. 208
acuminatissimum, Miq. ... „ 210
affine, *Korth.* ... „ 209
angustifolium, Wight ... „ 209
Arnottianum, Wight ... „ 209
ellipticum, *Korth.* ... „ 211
flavescens, *Roxb.* ... „ 209
flavescens, Roxb. ... „ 209
flavescens, Wall. ... „ 209
glaucum, *Wall.* ... „ 209
Griffithii, *Hk. f.* ... „ 210
insigne, *A. W. Benn.* ... „ 211
Maingayi, *Hk. f.* ... „ 210
obscurum, *A. W. Benn.* ... „ 211
paniculatum, Miq. ... „ 209
Roxburghianum, Wight ... „ 209
rufum, *A. W. Benn.* ... „ 210
stipitatum, *A. W. Benn.* ... „ 210
undulatum, Wight ... „ 209
virens, Roxb. ... „ 209
Xanthoxylon, see Zanthoxylum ... i. 492
Xeropappus lanuginosus, Wall. iii. 387
Xerospermum, *Bl.* ... i. 686
Noronhianum, *Bl.* i. 685, 686, 690, 691
Xerotes leucocephala, Br. ... vi. 664
Ximenia, *Linn.* ... i. 574
ægyptiaca, Juss. ... „ 574
ægyptiaca, Roxb. ... „ 522
americana, *Willd.* ... „ 574
? *lanceolata*, DC. ... „ 498
? *olacoides*, W. & A. ... i. 574, 584
Russeliana, Wall. ... i. 574
Xiphion Aitchisoni, Baker ... vi. 272
Donianum, Alefeld ... „ 272
Xiphocarpus candidus, Hassk. ii. 111
Xipholepis aspera, Steetz ... iii. 233
silhetensis, Steetz ... „ 232
Xiphosium ... v. 786
acuminatum, Griff. ... „ 808
Xylia, *Benth.* ... ii. 286
dolabriformis, *Benth.* ... „ 286
Xylocarpus ? Antila, Ham ... i. 563

Xylocarpus Vol. Page
Granatum, Kœn. ... ... i. 567
moluccensis, Rœm. ... ... „ 567
obovatus, A. Juss. ... ... „ 567
Xylophylla Lucena, Roth ... v. 329
obovata, Willd. ... ... „ 328
Xylopia, *Linn.* ... ... i. 84
caudata, *Hk. f. & T.* ... „ 85
Championii, *Hk. f & T.* „ 84
dicarpa, *Hk. f. & T.* ... „ 85
elliptica, *Maing.* ... ... „ 86
ferruginea, *Hk. f. & T.* ... „ 83
fusca, *Maing.* ... ... „ 83
magna, *Maing.* ... ... „ 84
Maingayi. *Hk. f. & T.* ... „ 85
malayana, *Hk. f. & T.* ... „ 83
nigricans, *Hk. f. & T.* ... „ 84
obtusifolia, *Hk. f. & T.* „ 83
oxyantha, *Hk. f. & T.* ... „ 83
parvifolia, *Hk. f. & T.* ... „ 84
pustulata, *Hk. f. & T.* ... „ 85
XYLOPIEÆ ... ... i. 46
Xylosma, *Forst.* ... . i. 194
controversum, *Clos* ... „ 194
latifolium, *Hk. f. & T.* ... „ 194
longifolium, *Clos* ... ... „ 194
Xylosteum asperifolium (*asperrimum*), Dcne. ... ... iii. 12
purpurascens, Dcne. ... „ 12
spinosum, Dcne. ... ... „ 13
XYRIDEÆ ... ... vi. 364
Xyridion aureum, Klatt ... vi. 273
Nothum, Klatt ... ... , 272
spurium, Klatt ... ... „ 272
Xyris, *Linn.* ... ... vi. 364
anceps, *Lamk.* ... ... „ 364
bancana, *Miq.* .. .. „ 366
capensis, Thunb. ... ... „ 366
indica, *Linn.* ... ... „ 364
indica altera, Vahl ... ... „ 365
lappacea, Heyne ... ... „ 366
malaccensis, Steud. ... ... „ 365
nilgarensis, Steud. ... ... „ 365
oryzetorum, Miq. ... ... „ 365
pauciflora, *Willd.* ... ... „ 365
robusta, *Mart.* ... ... „ 364
schoenoides, *Mart.* ... ... „ 365
Walkeri, Arn. ... ... „ 365
Wallichii, *Kunth.* ... ... „ 365
sp., Griff. ... ... „ 365
Xystidium barbatum, Presl vii. 98
maritimum, Trin. ... ... „ 98

Yoania, *Maxim.* ... ... vi. 123, 180
japonica, *Maxim.* ... ... vi. 123
Youngia acaulis, DC. ... ... iii. 396
ambigua, DC. ... ... „ 395
diversifolia, Ledeb. ... „ 395
Youngia Vol. Page
fastigiata, DC. ... ... iii. 395
fuscipappa, Thw. ... ... „ 395
glauca, Edgew. ... ... „ 394
Kochiana, Ledeb. ... ... „ 398
lyrata, Cass. ... ... „ 395
napifolia, DC. ... ... „ 395
napifolia, Wight ... ... „ 395
Poosia, DC. ... ... „ 395
runcinata, DC. ... ... „ 395
striata, DC. ... ... „ 395
Thunbergiana, DC. ... ... „ 395

Zalacca, *Reinw.* ... ... vi. 472
affinis, *Griff.* ... ... „ 472
Beccarii, *Hk. f.* ... ... „ 474
conferta, *Griff.* ... ... „ 473
edulis, Reinw. ... ... „ 472
edulis, Wall. ... ... „ 473
glabrescens, *Griff.* ... ... „ 473
macrostachya, Griff. ... „ 473
Rumphii, Griff. ... . „ 473
secunda, *Griff.* ... ... „ 472
Wallichiana, *Mart.* ... ... „ 473
Zaleya decandra, Burm. ... ii. 661
Zamia Corsoniana, G. Don v. 657
Zannichellia, *Linn.* ... ... vi. 568
gibberosa, Rchb. ... ... „ 568
palustris, *Linn.* ... ... „ 568
pedicellata, Ham. ... ... „ 568
pedunculata, Rchb. ... ... „ 568
tenuis, Reut. ... ... „ 570
Zanonia, *Linn.* ... ... ii. 633
cissoidea, Wall. ... ... „ 633
clavigera, Wall. ... .. „ 634
? *heterosperma*, Wall. ... „ 632
indica, *Linn.* .... „ 633
laxa, Wall. ... ... „ 633
pedata, Miq. ... ... „ 633
sarcophylla, Wall. ... ... „ 634
Wightiana, Arn. ... ... „ 633
ZANONIEÆ ... ... ii. 605
Zantedeschia aromatica, C. Koch ... ... vi. 532
cordata, C. Koch ... ... „ 532
fœtida, C. Koch ... ... „ 532
rubens, C. Koch ... ... „ 532
virosa, C. Koch ... ... „ 524
ZANTHOXYLEÆ ... ... i. 484
Zanthoxylum, *Linn.* ... ... i. 492
acanthopodium, *DC.* ... „ 493
alatum, *Roxb.* ... ... „ 493
alatum, Wall. ... ... „ 493
armatum, Roxb. ... ... „ 496
? *Bajarnandia*, Wall. ... „ 496
Budrunga, *Wall.* ... ... „ 495
Budrunga, Roxb. ... ... „ 495
? *connaroides*, W. & A. i. 496, 565

Zanthoxylum Vol. Page
crenatum, Wall. ... ... i. 495
cuspidatum, Champ. ... „ 494
? Finlaysonianum, *Wall.* „ 496
floribundum, Wall. ... ... „ 497
Hamiltonianum, *Wall.* ... „ 494
hostile, Wall. ... ... „ 493
khasianum, *Hk. f.* ... ... „ 494
Lamarckianum, Cham. ... „ 488
? *longifolium*, Wall. ... „ 496
lucidum, Wall.... .. ... „ 492
Marambong, Miq. ... ... „ 488
myriacanthum, *Wall.* ... „ 496
nilagiricum, Miq. ... ... „ 487
nitidum, Wall. ... ... „ 497
oblongum, Wall. ... ... „ 495
obtusifolium, Poir. ... ... „ 496
ovalifolium, *Wight* ... ... „ 492
ovalifolium, Wight ... ... „ 493
oxyphyllum, *Edgew.* ... „ 494
planispinum, Sieb. & Zucc. „ 493
pteleæfolium, Cham. ... „ 488
Rhetsa, *DC.* ... .. i. 495, 496
rhoifolium, Lamk. ... ... i. 496
Roxburghianum, Cham. ... „ 487
Rumphianum, Cham. ... „ 489
sapindifolium, Wall. ... „ 496
sepiarium, Wight ... ... „ 493
Serra, Turcz. ... ... i. 2 6, 496
sorbifolium, St. Hil.... ... i. 496
spondiæfolium, *Wall.* ... „ 496
tetraspermum, *W. & A.*... „ 494
? *Timbor*, Wall. ... ... „ 493
tomentellum, *Hk. f.* ... „ 493
triflorum, Turcz. ... ... „ 496
trifoliatum, Linn. lapsu
Xanthoxylon ... ... ii. 726
triphyllum, Wight ... ... i. 487
violaceum, Wall. ... ... „ 494
zeylanicum, DC. ... ... „ 487
Zapania nodiflora, Lamk. ... iv. 563
repens, Bert. lapsu L. ... „ 563
Zea, *Linn.* ... ... vii. 102
alba, Mill. ... ... , 102
americana, Mill. ... ... „ 102
Mays, *Linn.* ... ... „ 102
segetalis, Salisb. ... ... „ 102
vulgaris, Mill. ... ... „ 102
Zehneria, *Endl.* ... .. ii. 624
amplexicaulis, W. & A. ... „ 625
Baueriana, *Endl.* ... ... „ 624
cerasiformis, Stocks ... ... „ 630
connivens, Miq. ... ... „ 625
exasperata, Miq. ... ... „ 624
Garcini, Stocks ... ... „ 630
hastata, Miq. ... ... „ 625
Hookeriana, *Arn.* ... ... „ 624
mucronata, Miq. ... ... „ 624
Zehneria Vol. Page
scabra, Harv. & Sond. ... ii. 624
umbellata, *Thw.* ... ... „ 625
Zenkeria, *Trin.* ... ... vii. 270
elegans, *Trin.* ... ... „ 270
obtusiflora, *Benth.* ... ... „ 270
Zeocriton disticum, Beauv. vii. 371
murinum, Beauv. ... ... „ 372
secalinum, Beauv. ... ... „ 372
Zephyranthes tubispatha, Herb. vi. 277
Zerumbet speciosum, Jacq.... vi. 256
Zingiber, Lest. ... ... „ 247
Zeuxine, *Lindl.* ... ... vi. 106, 179
abbreviata, *Hk. f.* ... ... vi. 109
affinis, *Benth.* ... ... „ 108
bracteata, Wight ... ... „ 106
brevifolia, Wight ... ... „ 106
emarginata, Lindl. ... ... „ 107
flava, *Benth.* ... ... „ 108
goodyeroides, *Lindl.* ... „ 107
integerrima, Lindl. ... ... „ 106
longifolia, *Hk. f.* ... ... „ 109
longilabris, *Benth.* ... ... „ 107
membranacea, Lindl. ... „ 106
moniliformis, Griff. ... ... „ 105
moulmeinensis, *Hk. f.* ... „ 109
nervosa, *Benth.* ... ... „ 108
procumbens, Bl. ... ... „ 107
regia, *Benth.* ... ... „ 108
reniformis, *Hk. f.* ... ... „ 107
robusta, Wight ... ... „ 106
sulcata, *Lindl.*... ... vi. 106, 197
Tripleura, Lindl. ... ... vi. 106
Zingiber, *Adans.* ... ... vi. 243
barbatum, *Wall.* ... .. „ 244
capitatum, *Roxb* ... ... „ 248
Casumunar, *Roxb.* ... ... „ 248
cernuum, *Dalz.* ... ... „ 245
chrysanthum, *Rosc.*... ... „ 243
Clarkei, *King* ... ... „ 248
Cliffordiæ, Andr. ... ... „ 248
corollinum, *Hance* ... ... „ 249
cylindricum, *Moon* ... ... „ 247
elatum, Roxb. ... ... „ 249
flavescens, Link ... ... „ 243
gracile, *Jack* ... ... „ 246
Griffithii, *Baker* ... ... „ 246
intermedium, *Baker* ... „ 246
ligulatum, *Roxb.* ... ... „ 245
ligulatum, Wall ... ... „ 243
macrostachyum, *Dalz.* ... „ 247
marginatum, *Roxb.* ... ... „ 249
Missionis, Wall. ... ... „ 246
montanum, Link ... ... „ 248
nigrum, Gaertn. ... ... „ 254
Nimmonii, *Dalz.* ... ... „ 244
odoriferum, *Bl.* ... ... „ 249
officinale, *Rosc.*... ... ... „ 246

Vol. Page

- Zingiber
  - panduratum, *Roxb.* vi. 245
  - pardocheilum, *Wall.* „ 245
  - Parishii, *Hk. f.* „ 248
  - *purpureum*, Rosc. „ 248
  - roseum, *Rosc.* „ 244
  - rubens, *Roxb.* „ 243
  - spectabile, *Griff.* „ 247
  - *spurium*, Kœn. „ 247
  - squarrosum, *Roxb.* „ 245
  - *squarrosum*, Wight „ 244
  - Wightianum, *Thw.* „ 244
  - Zerumbet, *Sm.* „ 247
  - sp., *Bl.* „ 249
  - *sp.*, Griff. „ 247
  - sp., *Hance* „ 249
- ZINGIBEREÆ vi. 198
- *Zinnia Bidens*, Retz. iii. 310
- *Zizania aristata*, Kunth vii. 95
  - *ciliata*, Spreng. „ 94
  - *Retzii*, Spreng. „ 95
- ZIZYPHEÆ i. 630
- Zizyphus, *Juss.* i. 632
  - *acuminata*, Royle „ 634
  - *albens*, Roxb. „ 634
  - apetala, *Hk. f.* „ 635
  - *Baenchia*, Wall. „ 637
  - *Bhunder*, Royle i. 636, 637
  - ? *Buræa*, Ham. i. 636
  - calophylla, *Wall.* „ 636
  - *Caracutta*, Roxb. „ 634
  - *celtidifolia*, DC. „ 634
  - *cuneata*, Wall. „ 634
  - ? elegans, *Wall.* „ 637
  - *elliptica*, Roxb. „ 634
  - *ferruginea*, Heyne „ 634
  - *flavescens*, Wall. „ 637
  - *flexuosa*, Wall. „ 633
  - *floribunda*, Wall. „ 637
  - funiculosa, *Ham.* „ 636
  - *glabra*, Roxb. „ 636
  - glabrata, *Heyne* „ 633
  - globularis, *Wall.* „ 637
  - *hamosa*, Wall. „ 641
  - horrida, *Roth* „ 636
  - *Horsfieldii*, Miq. „ 637
  - incurva, *Roxb.* „ 635
  - Jujuba, *Lamk.* „ 632
  - *latifolia*, Roxb. „ 636
  - Linnæi, *Laws.* „ 635
  - *Lotus*, Lamk. i. 633, 637
  - lucida, *Moon* i. 635
  - *mauritiana*, Ham. „ 632
  - *microphylla*, Roxb. „ 633
  - Napeca, *Willd.* „ 635
  - *Napeca*, Linn. „ 635
  - *Napeca*, Roxb. „ 634
  - *nitida*, Roxb. i. 633, 637

Vol. Page

- Zizyphus
  - nummularia, *W. & A.* i. 633
  - *obliqua*, Heyne „ 336
  - Œnoplia, *Mill.* „ 634
  - *oppositifolia*, Wall. „ 641
  - *orbicularis*, Schult. „ 634
  - *ornata*, Miq. „ 636
  - oxyphylla, *Edgew.* „ 634
  - *pallens*, Wall. „ 634
  - *paniculata*, Roth „ 636
  - *pedicellata*, Wall. „ 634
  - *racemosa*, Wall. v. 270
  - *rotundifolia*, Lamk. i. 633
  - *rotundifolia*, Roth „ 634
  - *rufula*, Miq. „ 634
  - rugosa, *Lamk.* „ 636
  - *ruminata*, Ham. „ 634
  - *sativa*, Gærtn. „ 633
  - *scandens*, Roxb. „ 634
  - ? *sinensis*, Lamk. „ 633
  - *Sororia*, Schult. „ 632
  - *Spina-christi*, Linn. „ 637
  - ? *tomentosa*, Roxb. „ 636
  - *trinervia*, Roth „ 632
  - *trinervia*, Roxb. „ 633
  - ? *venulosa*, Wall. „ 636
  - vulgaris, *Lamk.* „ 633
  - wynadensis, *Bedd.* „ 633
  - xylopyrus, *Willd.* „ 634
- *Zoduba Masuca*, Ham. v. 851
- Zoegia, *Linn.* iii. 384
  - *aristata*, DC. „ 384
  - purpurea, *Fresen* „ 384
- *Zollikoferia chondrilloides*, DC. iii. 415
  - *glomerata*, Boiss. „ 417
  - *mucronata*, Boiss. „ 415
  - *nudicaulis*, Boiss. „ 416
- Zollingeria, *Kurz* i. 692
  - macrocarpa, *Kurz* „ 692
- *Zollingeria*, Schultz. iii. 248
  - *scandens*, Schultz. „ 248
- Zornia, *Gmel.* ii. 147
  - *angustifolia*, Sm. „ 147
  - *conjugata*, Sm. „ 148
  - diphylla, *Pers.* „ 147
  - *disperma*, Grah. „ 141
  - *dyctiocarpa*, DC. „ 147
  - *gibbosa*, Spanoghe „ 147
  - *graminea*, Spanoghe „ 147
  - *pulchella*, Pers. „ 162
  - *strobilifera*, Pers. „ 227
  - *Walkeri*, Arn. „ 148
  - *zeylanensis* Pers. „ 148
- *Zornia*, Moench iv. 665
  - *nutans*, Mcench „ 665
- Zosimia, *Hoffm.* ii. 717
  - absinthifolia, *DC.* „ 717
  - *orientalis*, Hofm. „ 717

Zosimia Vol. Page
radians, Boiss. & Hohen. ii. 717
tragioides, Boiss. ... ... „ 712
Zostera ciliata, Forsk. ... vi. 570
uninervis, Forsk. ... ... „ 570
Zosterostylis Arachnites, Bl. vi. 118
Walkeræ, Wight ... ... „ 118
zeylanica, Lindl. ... ... „ 118
Zoysia, *Willd.* ... ... vii. 99, 421
aristata, C. Muell. ... ... „ 99
Brownii, C. Muell. ... ... „ 99
Codia, Ham. ... ... „ 19
Griffithiana, C. Muell. ... „ 99
japonica, Wendl. ... ... „ 99
pungens, *Willd.* ... ... „ 99
sedoides, C. Muell. ... ... „ 99

Zoysia Vol. Page
setacea, Nees ... ... vii. 99
sinica, Hance ... ... „ 99
tenuifolia, Trin. ... ... „ 99
? *tremula*, Beauv. ... ... „ 250
ZOYSIEÆ... ... ... vii. 3, 96
Zwardekronia lurida, Korth. iii. 177
Zygomenes axillaris, Salisb. vi. 389
ZYGOPHYLLEÆ ... . i. 422
Zygophyllum, *Linn.* ... ... i. 424
coccineum, *Linn.* ... ... „ 425
? *connaroides*, W. & A. ... „ 565
simplex, *Linn.* ... ... „ 424
Zygospermum zeylanicum, Thw. ... ... v. 305

LONDON:
PRINTED BY GILBERT AND RIVINGTON, LD.,
ST. JOHN'S HOUSE, CLERKENWELL, E.C.